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Sheet Metal Convention—Pages 28 to 35.

AMERICAN ARTISAN and Hardware Record

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620 SOUTH MICHIGAN AVENUE, CHICAGO, APRIL 7, 1923.

\$2.00 Per Year



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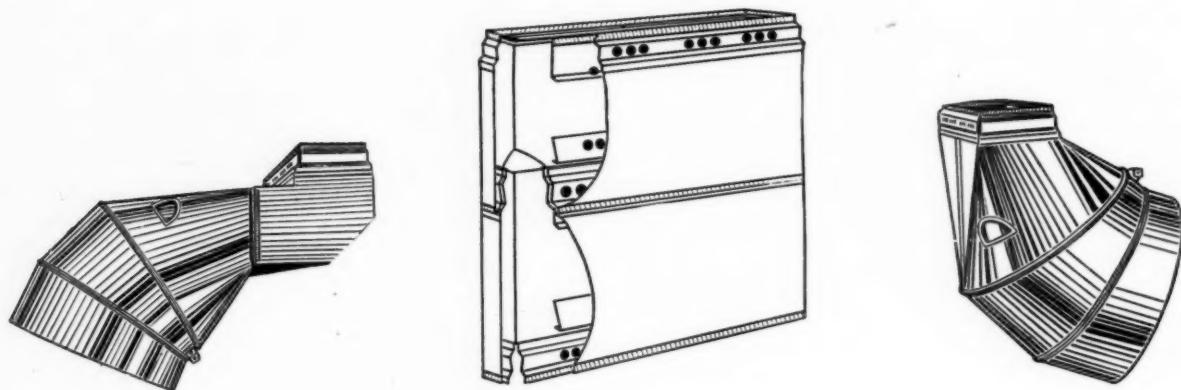
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ARE WE ENTERING UPON ANOTHER ERA OF INFLATED VALUES AND PRICES?

On every Thursday when our Market Editor is preparing his weekly review of the price and stock situation he naturally gives consideration to the "trend" fully as much as to the immediate facts and figures, and for the past few weeks he has been impressed with the fact that the trend, so far as prices are concerned, is decidedly bullish.

Some manufacturers appear to be perfectly willing to have the market go skyward, forgetting the 1920 disaster, or at any rate appearing to disregard altogether the lesson taught them; namely—

That there is a point beyond which the great consuming public simply refuses to go, for the reason that those whose income is fixed can not find the money to pay the price asked.

It is true that there is very little non-employment; that wages are considerably higher than they were a year ago; that supplies in some lines are low and that the present demand is strong. But—

Take, for example, the building industry.

Building labor is again going beyond a fair wage.

The cost of materials is increasing so much that it requires too large an investment for a man with even a fair, but fixed income, to make it possible for him to build a home, consequently he decides to delay his building operations until prices of building materials and labor costs are decreased, resulting in a general slowing up of industry.

It is true that March showed more building permits taken out in Chicago than ever before. But—

There is no one who can tell how long this activity may last.

It may be shut off at any time.

And this is likely to happen as suddenly as people stopped buying in 1920.

We are not crepe-hangers, nor are we bearish in our make-up, nor are we pessimistic by nature.

Rather, we lay claim to be sanely optimistic.

By this we mean, that we are not willing to drift with the current if that current shows signs of leading to a bad break and abrupt fall.

And there are such signs—right now.

It is true, of course, that when foodstuffs and other items in the cost of living advance, wages must also be raised; and when labor costs are higher, the selling price of the finished article must be advanced. But—

If you keep chasing around in this vicious circle of passing the cost on to the consumer, you are bound to hit a rough spot when and where you least expected it; and off you go at a tangent—out into the space of disaster, as happened in 1920.

Buy to keep your stock in serviceable shape.

Buy only what your needs for your regular turnover period require.

Then you will be serving yourself and those who look to you for advice, service and support in the best possible manner.

Random Notes and Sketches.

By Sidney Arnold

J. M. Beech, who lives in Maywood, Illinois, and in his spare moments induces installers in northern Illinois and southern Wisconsin to sell International warm air furnaces, was on one of the north side busses in Chicago when two women attempted to board it.

"One seat on top and one inside," called the bus conductor.

"Sure, now, an' ye wouldn't be after separatin' a daughter from her mother, would ye?" asked the elder of the two women on the sidewalk.

"I would not!" replied the conductor, giving the go-ahead signal. "I did that thing once and I've been regrettin' it ever since."

* * *

Bill Laffin, the Teeandbee man, is one of those who hold to the idea that married life is just about the nearest thing to Heaven—he has been married only a few months, you know—so he does not agree with the lover in this case:

He was calling on the one and only girl.

"William," she said softly, expecting the usual answer, "William, dear, have you any idea what Heaven must be like?"

"Yes, darling. Until today I had never given the matter much thought. But now I have a very clear idea of what Heaven must be like."

"Yes?" she murmured, snuggling closer. "Tell me what gave you this idea."

"Well, my angel, I was listening today to the recruiting officer describing life in the United States Marine Corps."

* * *

Here is a variation on the old story about the exaggerated death story of Mark Twain. It was sent to me by H. O. McElwain, of the Lenox Furnace Company:

"Do you stand back of every statement you make in your newspaper?" asked the timid little man.

"Why—er—yes," answered the country editor.

"Then," said the little man, holding up a notice of his death, "I wish you would help me collect my life insurance."

* * *

Julius Gerock, who makes sheet metal ornaments and other specialties, told me the following story when I was in St. Louis recently:

Two youths, cruising about for work, had finally acquired jobs giving wheel-chair exercise to the inmates of an old men's home. One morning one of them got the first customer of the day and started propelling him up the main street of the village. He was inexperienced, and his ancient charge gained several years in age as he barely escaped being shoved into the creek and then pushed under the wheels of a trolley car. At the top of a steep hill, his attendant paused.

"W-w-what are we waiting for?" gasped the chair's occupant.

"'S all right, old top," answered the other. "I'm waitin' for my buddy with another old gent. We're gonna have a race down the hill."

* * *

Here is a good one that comes to me from Lou Denoyer, President of the Illinois Auxiliary.

A cranky diner in a restaurant had made numerous complaints to the colored waiter and, these failing to bring any results, became beside himself with rage.

"See here, you!" he roared. "No matter what I say to you it doesn't seem to stir you up a bit."

"Nossuh," agreed the waiter placidly and amiably. "De boss done tol' me dat whenever a gem-mum talk like dat jes' to humor him."

* * *

W. M. Bivens, of the American Foundry & Furnace Company, is always on the job when there is a prospect in sight, but he doesn't

make "bulls" like the boss in the following story:

Excitedly the manufacturer of the World's Greatest Insect Exterminating Powder burst into the export manager's office.

"Hey!" he bellowed. "Have we got an agency in Egypt?"

"Why—er—no, sir."

"Well, why ain't we? I see a movie of them pyramids las' night and it says they was covered with millions of hieroglyphics."

* * *

Blair Quick, who sells Quick Heater furnaces and supplies out in Iowa, has a reputation for ready repartee, but I don't know whether he can work up a reply that fits as readily as the soldier in the following story:

The young private had been posted as guard on the Squadron B stables, but when the corporal of the guard made his rounds he was nowhere to be seen. The corporal was about to depart to make inquiries when there came a rustling noise from a heap of straw and the young sentry crawled out, sheepish, sleepy and minus his shoes.

"Hello," boomed the corporal, "where you been?"

"Marching around," replied the sentry in tones of conscious virtue.

"Marching around, huh? Why, you ain't even got your shoes on."

"Sure I ain't. I got some sense. I took 'em off so as I wouldn't wake the dog-gone hosses."

* * *

M. R. Ransburg, who sells Majestic warm air furnaces and Duplex registers, sends me the following bit of verse which contains a lot of good sense:

If you hold your nose to the grind-stone rough
And you keep it down there long enough,
You will come to say that there is no such thing
As brooks that babble and birds that sing—
These three will all your world compose:
Just you, and the stone, and your darned old nose.

Facts of Warm Air Heating and Ventilating.

Reports of Progress in Warm Air Heater Research Work. Ventilating Factories, Theatres and Other Buildings.

Census Bureau Shows

49% Increase in Value of Hot Air Furnace Products from 1914-1921.

The Department of Commerce at Washington, D. C., announces that, according to reports made to the Bureau of the Census, the value of products of establishments engaged primarily in the manufacture of stoves and hot-air furnaces amounted to \$101,558,000 in 1921 as com-

pared with \$145,718,000 in 1919, and \$67,941,000 in 1914, a decrease of thirty per cent from 1919 to 1921, but an increase of forty-nine per cent for the seven-year period 1914 to 1921. In addition, stoves and hot-air furnaces were also manufactured as subsidiary products by establishments engaged in other industries to the value of \$2,449,000 in 1921, \$1,706,000 in 1919, and \$1,861,000 in 1914.

soot may fire the timber. The newspaper reporters will write, "A Fire Caused by a Furnace," etc., etc.

Here You Will Learn Something About Troubles Caused by Badly Built Chimneys.

L. W. Millis Leads Discussion on Chimney Draft and Methods for Improving Same.

(Continued from March 31 Issue)

MR. BLENT, you have been putting in a lot of replacements. All those chimneys are built like Number 2. What are you doing with them?

Answer: I am cementing a joint of pipe into the wall clear into the chimney. If I can, I knock a hole in wall large enough to get cement around the pipe at the tile, but others saved large stones to put over the flu holes. I can't always do that, and my arms are not long enough to work cement into the joint at far

Figure 3 shows a smoke pipe barely entering the chimney.

Figure 4 shows one pushed in too far. You often find that condition.

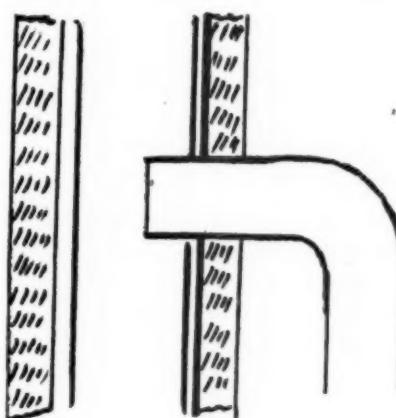


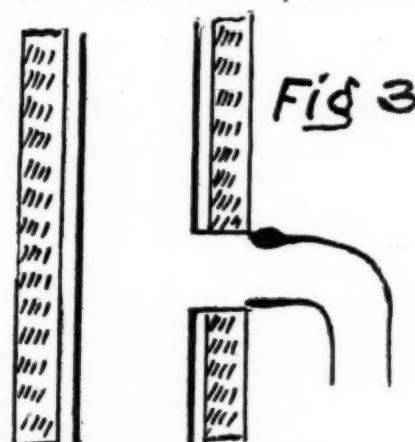
Fig 3

All our new thimbles have a bead rolled into them. The pipe cannot go beyond the bead.

Figure 4 shows a not uncommon condition. The brick is built out in chimney to cover the end of a girder built into the chimney. The capacity of the chimney is greatly reduced. Such places are apt to open up and expose the timber to the heat of the chimney. Some day the chimney may "burn out" and the burning



Fig 4



end of pipe. Sometimes I have to waste a couple of hours just to get a good flue connection.

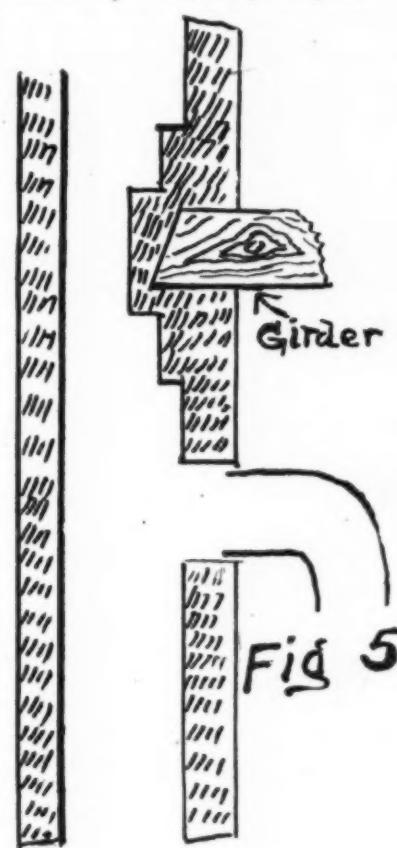


Fig 5

Figure 6 shows another common cause of grief. The fireplace and furnace are connected to one flue—still worse the offset, which is a bad thing in any case, is in the furnace side of the flue instead of the fireplace side. The only thing to do is close up the fireplace, and be sure to close it tight, or the user will insist "our furnace has no draft." Offsets like that often occur in a chimney above the attic floor. Mortar lodges in it and cuts down capacity. The results are bad draft, soot and cuss words. An offset always reduces the capacity a little.

Figure 7 shows how bricks may lodge in an offset and cause trouble.

Figure 8 shows two flues adjacent in one chimney. The many openings in the tiles allow the gas to flow from one flue into the other. Still worse, the partition does not

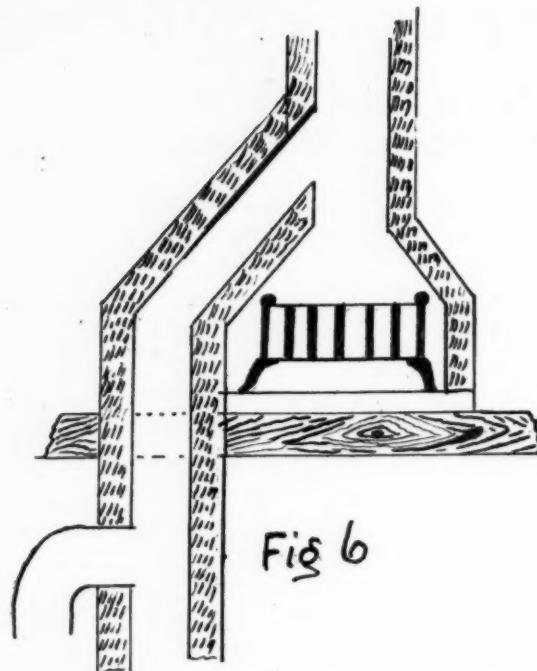


Fig. 6

extend to the bottom of the chimney. It is easier for the warmed side of the chimney to get air down the cold side of the chimney than it is to pull through a matted bed of coal. The result is a slow fire.

A chimney should always extend higher than the ridge of the house, by at least three or four feet. Oh yes, I know architects are drawing plans showing 12 to 18 inches of chimney above ridges. Architects can make chimney errors in the interest of presumed beauty, but the low chimney is often a source of great trouble.

Figure 9 shows a tree close enough for the wind to whip back around and down the chimney. If a high building is located similarly to the trees the effect would be about the same.

Will someone wake Mr. Poslon up? I can't talk against a snore like that. For fear you all go to sleep suppose we get into the Query section of the subject. Let them come lively.

Question—You show the wind blowing toward the tree past the chimney. I always thought of it as being bad when the wind came the other way. How about it?

Answer—Let's hear everybody's experience. We hear lots about high buildings and trees and high ridges affecting chimneys.

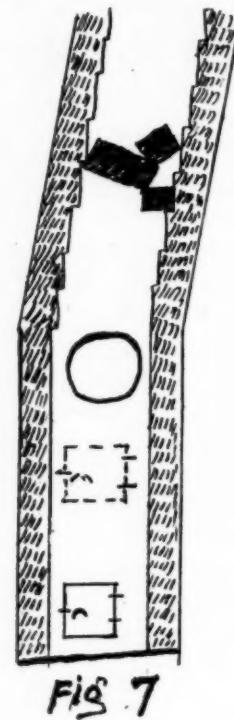


Fig. 7

Mr. Blent: I used to think that a high building only cut a draft down when it was between the wind and the chimney, but I found many

cases where it seemed to work all right with the wind that way. I have found many that worked badly unless the wind was parallel with the high building.

Mr. Redding: I think a building with a fire wall beyond the chimney is worse when the wind comes across toward the high building. It seems there is a pocket there and the wind whips downward and even blows down the chimney. If the flue is run up quite a ways above the level of the fire walls, it helps even if it don't go as high as the high building.

Question—You said a while ago that no air should go into a chimney that does not go through the fuel. How about check drafts in smoke pipes?

Answer—I would prefer to not discuss air through coal or over coal until we take up "combustion" in connection with chimneys. But it is a good time to speak about air

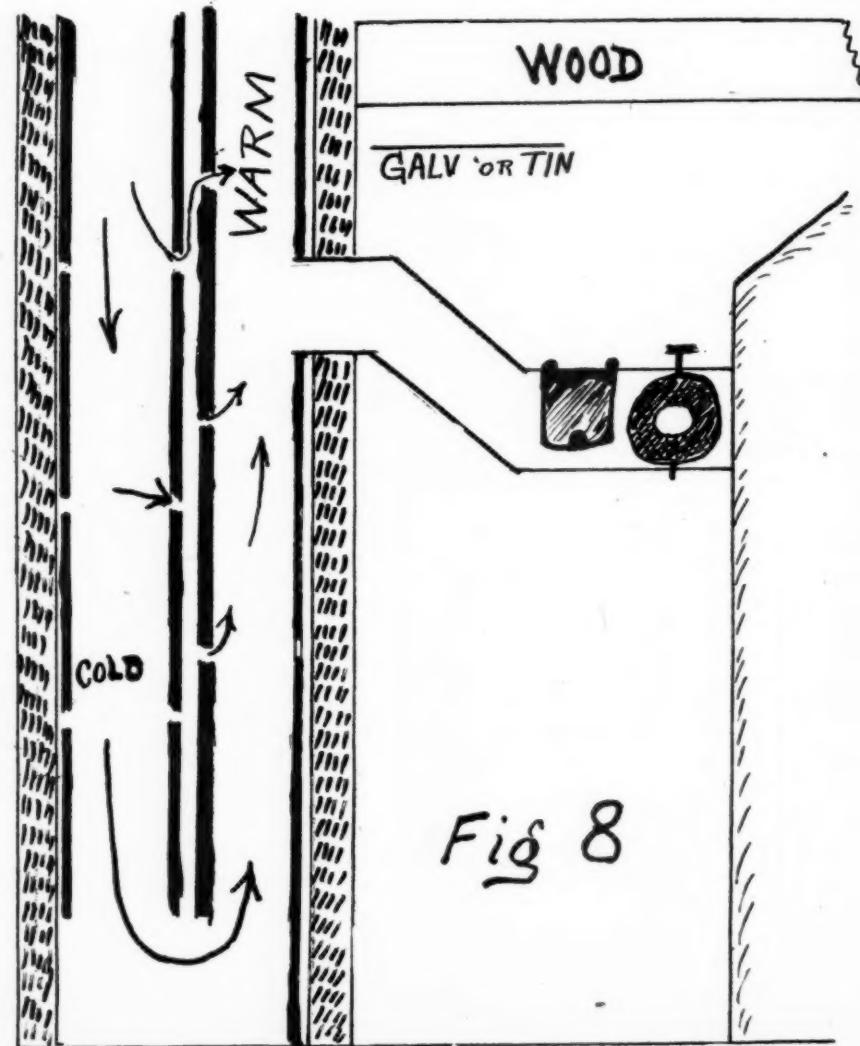
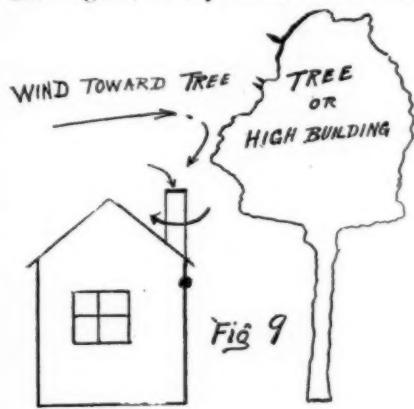


Fig. 8

through check drafts in flue pipes. Let us refer to that table of velocities in chimneys. Look at the bottom line. Temperature 350 degrees, velocity in a 20 foot chimney 901 feet. We had to burn fuel to get that 350 degrees. When the house gets warm we want to reduce the fire. Of course the air supply to ash pit should be cut off first and if further decrease is needed we must do something to affect the draft in the chimney. If the check that lets air into smoke pipe is opened the draft will of course be reduced. The cold air lowers the temperature in chimney below 350 degrees. When we need a strong draft again, in say an hour or two,



the chimney and chimney gases will be cold, possibly down to 125 degrees, with a consequent velocity of 541 feet. We must burn extra fuel to get it up to the 350 degrees again. I hope you understand that I am using these particular figures for illustration only.

Let us suppose that instead of raising the check draft in figure eight that we had let no cold air into the chimney through the check, but had turned the volume damper so that the volume of gas drawn was reduced. Then the fire will be checked, but the temperature of the chimney won't fall so fast. It will be good and hot when the next fire is needed. But people want to use a chain instead of going down to turn the volume damper. However, the use of the volume damper instead of the check in smoke pipe will help many a bad chimney.

Question—The man I worked for in Ohio always told us to put the cast, or volume damper, between the

check and the chimney. You reverse it. Does it matter which way it goes in?

Answer—Yes, Figure 8 is correct. The check would let in more air than could pass the closed volume damper if the volume damper is between the check and the chimney. One of these would be useless that way. We have talked about chimneys this evening and not very much about the fire or combustion of the fuel. It is closely related to the chimney.

How many want to spend more

time on the subject of chimneys? Hands up. Well, it seems unanimous.

How many expect to be here at the next meeting? That seems unanimous also.

Chimneys are not very interesting, but combustion is really interesting. I think you will all stay awake next time.

Mr. Richardson: Take some chewing gum yourself. Give me one please, and pass the filthy weed to the remainder of the gang. Good night.

Zideck Analyzes Requirements of What He Terms the Ideal Heating Plant.

Strong Selling Points Are Contained in This Article for the Local Furnace Installer.

Written Especially for AMERICAN ARTISAN AND HARDWARE RECORD by E. E. Zideck, Instructor in Charge of Heating and Sheet Metal Work at Lincoln Institute, New York City.

Second Article.

TAKE the common room heater of a few years ago! It was made of a metal thickness slightly less than is a one cent coin. It has done its service all winter, on many a day fired up to a glowing red. It was moved away in the spring to be set up again in the fall and used in that way for many a year.

Did you ever notice it to burn out? Didn't you see its drum, only of sheet iron, red hot day after day, without the metal getting a hole in it? Did you notice the bulbs that formed the third, fourth, or fifth winter, but the metal still intact and admitting of no smoke or ashes to come out of the heater?

Well, that was not because the metal used in those heaters was any better than is the metal of today, but because the heater was at all times *in touch with cold air*. Were it not for that, the comparatively *thin* metal of the heater could not last one winter.

How is it, then, that the furnace, made of heavy castings, has burned holes and cracks in it and warps and becomes disjointed in so short a time?

It is because the furnace is encased.

Within the furnace casing the air is heated up and, if it is allowed to remain there, the castings soon become glowingly hot. There is the fire on the inside and the overheated air on the outside, and it is *natural* that the metal becomes hotter and hotter and brittle. Poking in the coal and other causes make the brittle metal crack and fall out. Or, the intense heat causes the castings (or the steel parts for that matter) to expand and warp. The cast parts are dislodged from their formerly tightly fitting joints, and the steel parts crack the rivets holding them together. The result is *holes* for smoke and ashes to enter into the casing and be carried into the rooms.

Only the grates and the lowest part of the fire pot, the base, holding the grates, do burn out because of *ashes* being allowed to stay in the pit, reaching up to and enveloping the former. Hot ashes from below and glowing coal from above do to the grates what the fire on the inside and the over-hot air on the outside do to the other parts of the furnace.

The ashes can be taken care of by whomever tends the fire. He is competent to remove them each day, leaving the pit clear for *cold air* to enter and protect the grates from below against the fire making them brittle, warping and burning out. But he can do *nothing* if the furnace overheats the other parts. Here he must call in the man who knows what is at fault and how to do away with it.

As before said, *the air within the casing is too hot*. There is no proper *fresh air* coming into the casing and whatever air enters is *insufficient* to take off the heat. The air is *burned* instead of *warmed*, and the metal of the furnace, *not cooled* by a moving stream of fresh air enveloping it, suffers.

The same results are obtained by an encased furnace having no proper *hot air leaders*. Here the supply of fresh air might be unlimited, but if the hot air produced by the glowing castings or steel parts is not allowed to freely escape, it will remain within the casing, preventing the fresh air to enter, and the furnace will be red hot shortly after a good fire is started in it and continue glowing as long as the fire is burning. The frequent change from *cold* to *red hot* metal tells on it, and the furnace joints dislocate quickly.

The properly installed furnace should permit of the hands resting upon the casing, at any time when a good fire is burning within, without getting *burned*. If the hand can not rest freely upon the casing at such a time, it is a sign that *air has not proper circulation*, and that changes are necessary.

The changes, to be sure, must be in that part of the furnace which has to do with *circulation of air*. The firing apparatus itself has nothing to do with it. The firing apparatus, no matter whether cast or steel, light or heavy, simple or complicated, could stand in the cellar *without the casing* and fired winter after winter, *without getting burned out*.

Less the casing, the furnace would act and react as a huge *stove* would. It would warm up the air

nearest to it, sending it upwards and radiating it sideways, while the cold air from all parts of the cellar would rush in to fill *the vacuum* created by the warmed air streaming away. As long as the cellar has openings for air to come in and leave, there would be constant air change around the stove, protecting its metal from overheating and burning out.

But once you *encase* the stove, this change of air is shut off, except you provide for it; and these air provisions are wholly in the hands of the *installer*.

Some of the older furnaces, it is true, are providing insufficient *space* for the air. But these provisions consist of the casing rings alone. They can be replaced by rings of greater circumference to admit of a casing of the air capacity the firing apparatus is capable of heating.

The man who dreads the work of making the furnace casing large enough for the volume of air the furnace is capable of heating (and the work of making the smoke connections, the clean-outs and other extensions fit) had better leave the job alone. It is no work for a second-rate man. Nor can it be done except by a first-class sheet metal worker who knows heating, or who has been given the plans for it by a competent heating engineer.

Now, a *large* casing will house a bulk of air. But if that air is allowed to remain within the casing, it will not get as hot as a small volume of it would, because the larger radiating area of the enlarged casing would transmit it more readily to the outside; and still it would get hot enough to cause the furnace to glow and burn out quickly.

Besides, there is no use for the air remaining hot within the casing. The changes are made with the end in view to bring the heat *into the rooms above*. And the air, allowed to enter the casing in volumes as the furnace is capable of heating, must be made to *travel that way*.

Just as it is necessary to protect the furnace from getting too hot, warping and burning out, by a bulk of *cold air* enveloping it, so is it necessary to make the *heated-up* air

travel away from within the casing. First, because it is of no use in the casing; second, because it is wanted in the rooms; and, third, because the quicker it travels away from the furnace, the better is the furnace protected.

The furnace-stove, once its metal is hot, imparts the heat to the air enveloping it. The heat-diffused air, being *lighter* than is the unheated air, *rises*. It rises to the top in the casing, the cold air *falling* and taking its place at the hot metal surface of the stove. If the casing around the furnace is *air tight* throughout, except for the cold air supply and the warm air discharge openings, the *rising* air will draw after it *cold air* from the bottom of the casing, then from the cold air supply pipe, and then from whence the air is taken.

The *draft* of the air will be automatic and will develop in force and velocity as the furnace heat increases.

But only a *correctly* planned and installed furnace will develop this automatic change of air. Insufficient cold air supply at the bottom will cause *cold air* coming in through *warm air registers*. The same will happen to a furnace having a casing which permits enough of air at the bottom but which *narrow*s down the space for air to rise. In this case the upper part of the furnace, the radiator and its connecting sections, having not enough cold air from below, will *draw* cold air from above or, rather, there being but a small bulk of hot air going up, filling a few pipes only, certain pipes will allow for cold air descending through them to the furnace.

Casing dimensions must be determined wholly by the capacity of the furnace-stove within. The *hot* area of the castings or the steel drum is the *heat-radiating* area. The volume of air within the casing must equal or exceed the volume of heat mixed, at one time, with it.

That volume must have *free space* to rise through and into. A high hood above the casing will facilitate the rise. If the *warm* air pipes are *larger* than is the bulk of air

rising, *cold air* will come down through them. And if insufficient cold air supply is provided and the casing is leaky, air will be drawn in from the cellar.

The very nature of the system calls for air-tight leaders and air-tight casing throughout. If the leaders are not air-tight, air leaks in and out at other places than provided for it. The cold air rushing in through leakages in the supply pipe or the casing carries with it the impure air from the cellar. Dust and smoke from the cellar enter the air-chamber and the leaders, whence they are carried along into rooms.

Leakages in the casing hood and the warm air pipes diminish the *push* of the heated air rising. This air must fight the weight of the cold air contained in the pipes at the time the fire is started in the furnace. And if there are leakages, the heat will escape through them, rather than to fight the *cold* condensed and condensing in the pipes.

Again, the rush of the warm air through the pipes, once a clear way for it is established, will draw in the dusty and smoky cellar air and carry it along into the rooms.

Analyzing, we find the *faults* to be largely due to the careless, cheap, *fool-planning* and installation. *First*, the burning out of furnace parts, impaired draft and smoke in rooms is due to *insufficient cold air* around the firing apparatus.

Second, a larger combined area of the warm air pipes than is the heating area of the furnace results in *cold air* descending through the too large pipes.

Third, insufficient or obstructed cold air supply, in addition to causing the furnace to burn out, will retard the heated air within the casing and the pipes, heating the cellar but not the rooms.

Fourth, leaky casing and leaders will not only carry dust and smoke into the rooms, but also impair the air-push through them.

Fifth, the combined defects enumerated in one, two, three and four, actually *nullify* the principles upon which the furnace system of

heating is based. The system can not perform successfully—if it performs at all.

Contrary to prevalent installations, which provide for *less* space around the furnace within the casing, and *less* cold air supply than warm air discharge, the nature of the system requires:

1. *A space within the casing as large as can be*—the limit to it determined wholly by the cellar in which the furnace stands and by the room in the cellar which it fills.

2. *Unlimited cold air supply*. The firing apparatus takes up just as much of air at one time as it can heat, and no more. But it takes *more* when it is fired up to capacity, and it should have enough of the cold air around to take it when it wants it.

3. *Combined area of the warm air carriers not to exceed the heating capacity of the furnace*. If it does, *cold air* will descend through them, no matter how large the cold air supply is otherwise.

4. *An air-tight system throughout*. If it is not, there can be no claim to *sanitary heat* in connection with the furnace and heating efficiency is impaired.

(To be continued)

Howard V. Linhard Is New Detroit Manager of Utica Heater Company.

The Detroit office of the Utica Heater Company, Utica, New York, is now to be located at 1265 Griswold Street, Detroit, Michigan. Howard V. Linhard will have the management of this office.

Never judge a customer by the size of his purchase, but treat everyone with the courtesy and consideration due him. The salesman who fancies himself witty, and who likes to be "smart" at the expense of a customer who is making a small purchase, is only laying up trouble for himself. Other customers do not care to hear that sort of thing, and the final outcome will be that there will be a new man holding down the position.

Statement of the Ownership, Management, Circulation, Etc., Required by the Act of Congress of August 24, 1912.

Of AMERICAN ARTISAN AND HARDWARE RECORD, published weekly at Chicago, Illinois, for April 3, 1923.

State of Illinois, County of Cook—ss. Before me, a notary public in and for the State and County aforesaid, personally appeared Etta Cohn, who having been duly sworn according to law, deposes and says that she is the business manager of the AMERICAN ARTISAN AND HARDWARE RECORD, and that the following, is, to the best of her knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, Estate of Daniel Stern, 620 South Michigan Avenue, Chicago, Ill.

Editor, A. George Pedersen, 620 South Michigan Avenue, Chicago, Ill.

Business Manager, Etta Cohn, 620 South Michigan Avenue, Chicago, Ill.

2. That the owners are: (Give names and addresses of individual owners, or if a corporation, give its name and the names and addresses of stockholders owning or holding 1 per cent or more of the total amount of stock.)

Sole owners—Estate of Daniel Stern, Leo Koretz and S. Westerfeld, Trustees, 620 South Michigan Avenue, Chicago.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state).

There are none.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company, but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

ETTA COHN,

Business Manager.

Sworn to and subscribed before me this 3rd day of April, 1923.

JOSEPHINE L. SCHROEDER,

[SEAL.] Notary Public.
(My commission expires May 20, 1924.)

You Wouldn't Leave Anything To Chance If You Were Making An Extended European Tour.

*The Heating of a Home Is Equally as Important;
Why Not Dwell on This Fact in Your Advertising?*

LET us ask you: If a man were going to make an extended pleasure trip through Europe or some equally interesting tourists' resort; that is, a tour that would require perhaps three or four months and one that would involve a considerable monetary expenditure, he would not for one moment think of leaving home without first having made adequate preparations weeks or perhaps months in advance. He would not think of leaving his own health and safety or that of his family to chance. He would consult the best authorities and collect the best available data, in order to be able to intelligently map out his itinerary. He would have revolved the entire project in his mind, consulting railroad and steamship offices, making arrangements with his bankers and insurance agents, in order that nothing would be left to chance.

Now, that is exactly what the Success Heater and Manufacturing Company, Des Moines, Iowa, had in mind when they inserted the accompanying full-page advertisement in a Des Moines paper Sunday, April 1. They have left nothing to chance. They knew that if a man were so discriminating in his preparations for a tour lasting three months, the subject of properly heating his home and thus protecting his health—a far more permanent project than a trip to Europe—he would certainly be interested in securing facts. They also knew that the well-being of a man's family depends upon breathing wholesome, pure air that is fit to breathe; they knew that a man would go a long way in order to secure health and comfort.

A man will consider the economic side of the proposition, but his health and comfort generally come first; and here again the heating specialist must be prepared to answer his rapid fire questions.

With this knowledge of human nature in mind, a firm sets out to put the problem of health and comfort squarely before the prospective customer, illustrating the idea in type and pictures on a large scale. It believes in calling attention to the larger and more important items in the first "crack" and bringing the truth home with a "stunning" blow that strikes between the eyes when the reader opens the page; it must go right down into the basement of

facts, overturn the ash can of doubt and spread the truth on the floor; it not only unearths the facts, but labels them in a readable manner.

As will be seen by the date on the illustration, it was run recently, but the firm is confident that the results will justify the action.

The railroads took some 22 per cent of all the steel produced in 1922, being the largest percentage of all industries, and it is now estimated that purchases by the carriers in 1923 will be larger still, approximating \$700,000,000, as plans already announced by 27 roads, owning 40 per cent of the country's trackage, call for an expenditure of at least \$350,000,000.

DES MOINES SUNDAY REGISTER—APRIL 1, 1923

DES MOINES SUNDAY REGISTER—APRIL 1, 1923

Make your home Complete with a Success Heater

THINK

The proper heating of your home is the most important factor for health and comfort in all that goes toward its physical make-up.

The well-being of the family depends on breathing wholesome, pure air—air that has proper moisture—air that is fit to breathe.

Success Warm Air Heaters are built for quality and economy, are light, smoke, soot, and dust proof, made of Armco iron, resisting iron, economical in fuel consumption and will heat your home healthfully and efficiently.

Success Heater & Mfg. Co.
DES MOINES, U.S.A.

Newspaper Advertisement Showing How Manufacturer Co-operates with Dealers.

Practical Helps and Patterns for the Tinsmith.

**Aids to the Improvement of Craftsmanship and Business.
News from Various Branches of the Sheet Metal Trade.**

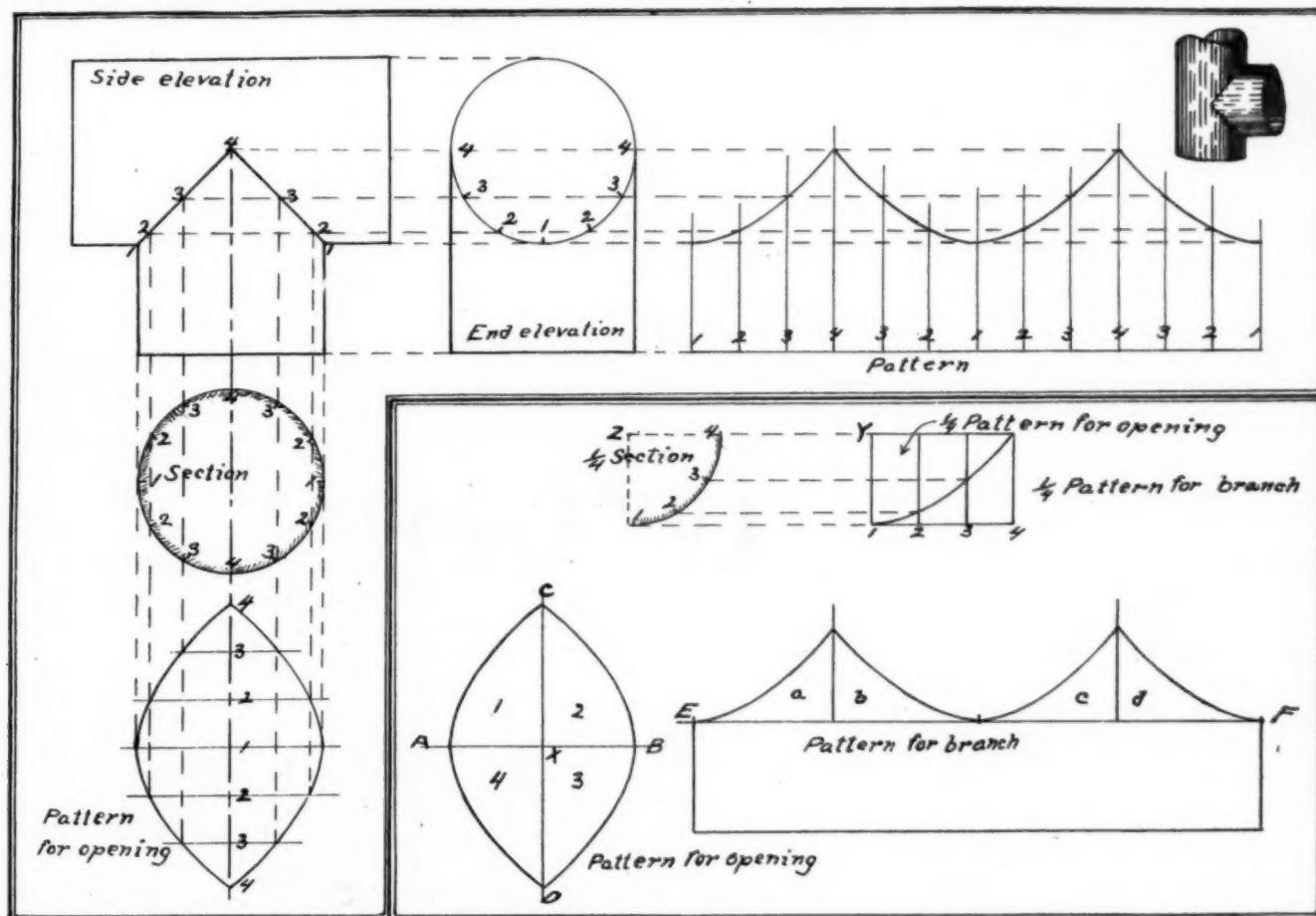
Patterns for Right Angle Tees of Same Diameter.

By O. W. Kothe, Principal, St. Louis Technical Institute, St. Louis, Missouri. Written especially for American Artisan and Hardware Record.

Tees as shown in sketch of this drawing are often used for smoke pipe work. Owing to the right angle

the pipe with the strongest draft gives the most satisfaction, while the other fills up with soot. Then again, by entering the tee at a right angle, the flow of air and smoke from the branch into the main pipe; it sort of cuts off the flow in the main pipe. Not only this, but the volume sort of bounds against the back of main pipe and then rebounds, thereby cutting off the flow

angle tee of this nature is very simple. We first draw the end elevation where the circle shows the section of the main pipe. Divide one-quarter or one-half of this circle in equal spaces, then project lines to the right indefinitely. Pick the girth from this section and set it off on a line as 1-1; erect lines until they intersect those from section of similar number. This gives the girth and



Designs for Right Angle Tees of Same Diameter.

position and no allowance made for the increase in volume tees of this kind are not very efficient. Observe that the main pipe is generally proportioned to accommodate the area at a further distant stove or furnace. Then by tapping in a tee, the area is increased at this point, but the main pipe is not enlarged to accommodate the two areas. Hence, the one or the other is retarded. Usually

in both pipes, before the volume is started toward the chimney. Most of these things are known by the trade, but still right angle tees of this nature seem to be quite popular, possibly because they are simple to lay out and rapid to make up.

The correct tees would be to place this tee on an incline and enlarge the main pipe to accommodate the two areas. The development of a right

pattern for tee.

It is not often that the opening is laid out, but we see the tee fits over the main pipe equal to the distance of 4-1-4 of end elevation. Now as this tee is straight the lines from the section remain the same, whether they are developed from the side elevation or the end elevation. But by the proper projection a side elevation is drawn, placing the miter

lines 1-4-1 on 45-degree lines. The lower section is merely drawn to show that the lines from the end elevation and this section correspond. So by picking the girth for opening, as 4-1-4 of end elevation, we set it off on a line below side elevation as 4-4. Draw stretchout lines and from each point in section or miter line drop lines to intersect those in pattern of similar number. At these intersections, sketch a uniform curve and you have the pattern for opening. Observe that this opening can be developed from the end elevation of section as well as the side elevation, since the lines work out the same.

For shop work, the quarter pattern is generally sufficient. For this describe the quarter section as Z-4-1 equal to the radius of the pipe under development. Divide this in equal parts and set off the girth for a quarter pattern as 1-2-3-4. Then develop the miter line as shown. The lower part will be the pattern for branch, and the upper part will be a quarter pattern for the opening. Let E-F be the girth for a jointed pipe and a line drawn down from the edge. Then take this quarter pattern and place in the position of a and mark the outline. Reverse this pattern to position b and mark the outline. Repeat this with positions c and d and the pattern is finished. Same holds true for the opening where that quarter pattern is placed parallel with the cross lines A-B and C-D and in different quarters as 1-2-3-4 are marked off.

This quarter pattern for the opening is often saved for future reference because with it you can make a two-piece right angle elbow by just simply reversing the pattern in those several positions to make miter cut for elbow. This works out for any diameter, but only for 90 degrees square elbows.

Clayton & Lambert, Detroit Make Extensive Factory Addition.

As an indication that this firm is not being left behind in the march of progress, the Clayton & Lam-

bert Manufacturing Company, Detroit, Michigan, is making an extension, 60x180 ft., to one of its numerous factories, which, it is stated, will be completed about April 15.

The firm has already outgrown the plant erected about two years ago, and the factory is being equipped with the latest improved

machinery for the manufacture of sheet metal stamping, double blunt needle fire pots and torches, oil burning appliances, etc., making the extension necessary. The accompanying illustration gives the reader some idea of the vastness of the plant. A recent catalogue has also been issued by the firm.

Copper Research Association Launches Unique Educational and Selling Campaign.

Personification of Figure of Rust to Exemplify Uses of Copper and Brass.

ONE of the largest campaigns of its kind ever inaugurated by any organization in the trade has been put in operation by the Copper & Brass Research Association, New York.

The primary object of the campaign, of course, is to eventually increase as much as possible the consumption of copper, bronze and brass. The project is a combination of educational and sales advertising, with the end in view to educate the public into the use of copper, bronze and brass and to drive home the fact that when these metals are used, the first cost is the last and only cost; that rust is an unnecessary waste which burdens the accumulated wealth of the nation with an annual

tax of \$626,500,000; that the remedy is to be found in the use of metals belonging to the non-ferrous group which do not rust.

The advertising in connection with the project began March 19 and appears weekly in sixty-four of the leading newspapers of the country in the form shown in the illustrations given. The complete service is offered free to dealers and sheet metal contractors, together with mats of one, two and three column advertisements for use in local papers.

The novelty of the advertising in connection with the campaign is the personification of the figure of rust, which is depicted as a wild and hunger-stricken animal in many dif-



Specimen Advertisements Used in Anti-Rust Campaign.

ferent poses of devastating action.

The association has gone far in coöperating with dealers to enable them to tie up with the advertising of the association. For the sheet metal contractors the association has prepared for distribution in their neighborhoods many illustrated leaflets on subjects such as the following: "Once Upon a Time," a humorous treatment of the rusty roof and roof drainage, making an ideal followup; the booklet, "Copper, the Ideal Roof," to send to roofing prospects; the book, "How to Build a Better Home"; two-color window signs, printed in black on a copper background—two of these are sent to each contractor; a roofing manual, with specifications and working drawings. In addition to these, a complete treatment of the subject of "Copper Flashings" for every use is being prepared.

The association is also furnishing mats for one, two and three column advertisements such as those shown for use by sheet metal contractors in their local papers. It is also prepared on short notice to contribute papers offering suggestions for effective publicity.

Though every home owner realizes the depreciation of property caused by the effects of rust, people are forgetful of things which do not stand out prominently in their everyday lives. It is therefore the purpose of the association to assist sheet metal contractors in reminding the public of the rust-resisting properties of copper, bronze and brass, thus inculcating the idea of the necessity of using these metals in preference to sheet steel products, especially where the metals are exposed to the inroads of oxidation.

In announcing this campaign, the Copper & Brass Research Association has issued a leaflet containing a complete outline of the plan, and this has been mailed to every sheet metal contractor in the United States. It contains forty newspaper advertisements, calling attention to the damaging effects of rust on metals other than those of the non-ferrous group.

In addition to the outline and the

advertisements, the leaflet contains the names of the producers, fabricators and manufacturers who are conducting the campaign through the Copper & Brass Research Association.

**Strauss & Blum, Inc.,
Develops 2 Heat Electric
Soldering Iron.**

By means of a newly developed and perfected method of embedding the pure solid bar copper heat conductor far into the copper tip of their Sabaco 2-Heat electric soldering iron, Strauss & Blum, Inc., 254 West 41st Street, New York, have secured an electric soldering iron which embodies an absolutely correct principle of electric heating, securing the most efficient results from current consumption.

The heat iron is guaranteed against factory and material defects for one year.

The Model B-100 and 130 watts, 110-220 volts is priced at \$6.00. Equivalent to 2 and 2½ pound pair old type soldering coppers—Tip 5/8 inch diameter and length 1½ inches. Model B-100 for radio work sells for \$6.50. Model B-100 consumes 90 watts on single and 120 watts on double heat.

It is an excellent, handy and convenient little outfit and well worth the price.

**Manny Heating Supply Co.
Exclusive Distributors
of Purnell Elbow Machine.**

The Manny Heating Supply Company, 131 West Lake Street, Chicago, announce that they are exclusive distributors of the new Purnell elbow edging and cutting machine

The purpose of the new machine is to enable the furnace installer to manufacture his own elbows and, therefore, save the investment necessary in keeping a stock of the various sizes of elbows on hand. For the manufacturer the machine will cut costs of elbows.

The machine carries a guarantee and it is constructed of the very best materials throughout.

Its bearings are machined from solid phosphorus bronze, and all gears are cut from high grade steel and keyed to shaft. Upper shafts rock on roller bearings independent of each other. Ball bearings are used on worm shaft to take up end-thrust entirely independent of motor shaft. All gears are entirely enclosed in central oil splash-case, lubricating gearings from within through splash system.

**Callender Soldering Process
Tinning Company Have
Retinning Process.**

W. V. Callender, manager of the Callender Soldering Process Company, 14 South Jefferson Street, Chicago, was for a number of years a sheet metal worker in Los Angeles, California. While working at the bench, Mr. Callender became convinced that retinning could be made quite a profitable line for the sheet metal shop, provided a moderate-priced, dependable and easily-operated retinning outfit could be obtained.

The Callender process of tinning, which is patented, can be used for retinning meat hooks, ice cream cans, hotel and restaurant ware, milk cans and the like, from the smallest size to the equivalent of a ten-gallon milk can. The entire equipment can be had for \$95, and the Callender Soldering Process Company say they will be glad to go into the matter thoroughly with any interested sheet metal contractor.

**AMERICAN ARTISAN Brings
Replies from All Sections.**

To AMERICAN ARTISAN;

Will you please take my ad for tinner out of your paper? I have had inquiries from all sections of the country and believe I have secured the services of a first-class mechanic.

Thanking you for your assistance in this matter, I am,

Yours respectfully,

L. A. BALLARD.

Cherokee, Iowa, March 29, 1923.

Illinois Sheet Metal Contractors Hold Successful Convention at Decatur, Illinois, April 4 and 5.

A. J. Hermsdorfer Re-elected President; Members Laud Work Accomplished Throughout Year; Knisely Shows How Cost Plus Profit Equals Selling Price.

THE Tenth Annual Convention of the Sheet Metal Contractors' Association of Illinois was held in the Orlando Hotel, Decatur, Illinois, April 4 and 5. The host of Illinois convention was the Sheet Metal Contractors' Association of Decatur.

The first session of the convention was called to order by Walter Dennis, President of the Decatur Sheet Metal Contractors' Association, who introduced City Mayor Charles M. Borchers, who delivered the address of welcome. The response to the address of welcome was given by A. J. Hermsdorfer, Quincy, Illinois.

In his opening address President A. J. Hermsdorfer called attention to the work of the organization that had been accomplished during the year and made several recommendations. He also asked for appropriations for organization work. His speech in part follows:

A year ago, when in convention at Rock Island, you honored me with the highest gift at your command. I made you but one promise. It was that I should do all in my power in the interests of the association. Today we again meet in convention, and with my year of service now almost entirely behind me, I greet you with the confidence of one who has kept his promise. I can safely say that the year just closed has been a satisfactory one for our organization. Our report will show an increase of forty new members in the association. I have mailed over 600 letters, encouraging sheet metal contractors to join and help with the good work, which is helping them in the state. Our secretary has done likewise.

Your president and secretary have done considerable traveling this

year in the interest of the association. We have visited Decatur and were successful in organizing that unit and were instrumental in getting the Decatur contractors to entertain our annual convention, for which convention I am proud to say they have arranged a good program. We have also organized the Danville contractors. I have visited East St. Louis and have tried

have a consistent plan of increasing our membership, because there is no provision made to defray the necessary expenses. I suggest that we adopt a budget system, the same as many firms have in their businesses. I should suggest that we allow at least \$300 per year for organization work and for making visits to the towns where a local organization needs encouragement. I mean that traveling expenses alone should be paid, no salaries. These visits could be made by the president, secretary, board members or membership committee nearest the town.

I find there are a great number of contractors who do not know the actual value of an organization, and the benefits they derive indirectly from state organization; they do nothing for it. They should at least belong to the state association, for they owe something towards its support.

Your president has visited the state capitol and has had conference with the legislation and senate committees in regard to "killing" some of the measures that were up in the legislature and senate; for instance, the woman's eight-hour law, the woman's minimum wage per week, the unemployed bill, old age pension bill, anti-injunction law, the six-day week law and several others. I recommend that we encourage the state members to take our part and assist us in the wonderful work the Peoria local organization is doing for educating of the apprentices.

There is another year before us. What will we do with it, and what will it do for us? The answer depends upon what use we make of our time. First, we must decide what we ought to do to make this year better than the past. We must think, think logically, and then act;



A. J. Hermsdorfer,
Re-elected President.

to induce the contractors there to join the association. Here, however, I was unsuccessful in my mission, but I sincerely believe the boys will join before long.

After a year of service as your president, I find a number of discouraging practices which we should strive to eliminate; namely, there is not enough coöperation among the committees and officers and members as well. The association is your association, and your help can do a great deal to make its work a success. A suggestion to the president or secretary at times would help a great deal.

Our membership is not one-half so large as it should be. We do not

for it is our actions that carries us forward. There must be no delay. We must use our time as it passes, for time is flying swiftly by. Our accomplishments, our life, our records, all depend on what we do with our time. Let us all resolve to use this time thoughtfully, carefully and with a full measure of our ability



Fred Gross,
Re-elected Secretary.

for the interest of the association and its members.

Wednesday Afternoon Session.
Return of the Sheet Metal Cornice.

At the Wednesday afternoon session, Secretary Fred. C. Gross read the minutes of the 1922 annual meeting, after which Harry C. Knisely, of the H. C. Knisely Company, Chicago, on "The Return of the Sheet Metal Cornice," referring to the large quantity of this sort of work which was done thirty years ago.

Mr. Knisely pointed out that one of the chief reasons for the dying out of the sheet metal cornice during the early years of the twentieth century was the poor quality of work and material which had been put up and also the fact that terra cotta and cut stone manufacturers had been aggressive enough to take advantage of this situation.

During the past few years, however, Mr. Knisely said, architects had come to recognize, that a well put up sheet metal cornice made of good material was not only a desirable ornament but also a decided im-

provement on either terra cotta or stone, for the reason that it was made of copper or zinc or if made of galvanized sheets properly painted and cared for, would withstand the ravages of storms, frost and heat far better than either of the other two materials. People have been killed by pieces of terra cotta or stone falling to the street, having become loosened by action of the weather or by faulty anchoring.

The speaker cited the new Illinois Merchants Bank Building which occupies a full block between Clark, La Salle, Quincy and Jackson streets in Chicago as one of the many new costly business structures which are being equipped with sheet metal cornices, the cost in this case being over \$55,000.00 for this work alone. This cornice is ten feet high with a six foot projection.

Another instance named by Mr. Knisely is the Western Union Telegraph building across the street, at Jackson and Clark, which has a sheet metal cornice 400 feet long, five feet high and with a projection of three feet.

With these as examples, Mr. Knisely pointed out, the sheet metal contractor should have no trouble in convincing architects and builders that sheet metal cornices are the proper "topping off" for business structures, residences or any other buildings which require cornices.

Who Shall Hang Metal Doors.

The speaker then went into considerable details about the matter of the coming jurisdictional award on the erection of hollow metal doors, windows and metal trim, showing that the arguments, presented by him and George Thesmacher, Cleveland, at the February meeting of the National Board of Jurisdictional Awards in Washington, fully controverted the untrue statements and claims made by the general contractors' and the carpenters' representatives.

The next meeting of the Board will take place May 21st at Washington, and the sheet metal contractors owe it to themselves, Mr. Knisely emphasized, to make certain that the original decision—giving this

work to sheet metal workers—is sustained.

In closing, the speaker referred to the fight for honest labor and contracting conditions which the Citizens' Committee to Enforce the Landis Award is carrying on in Chicago. He pointed out that since this committee began to function there had been no successful attempt to exact graft from builders, contractors or owners by business agents, and that this alone was enough to justify the support of every one who believes fair pay to employees, fair profit to the contractors and material men and a fair job at a reasonable price for the owner.

A rising vote of thanks was extended to Mr. Knisely on behalf of the Chicago Sheet Metal Contractors who at great cost to themselves are helping to establish such conditions in Chicago. President Hermsdorfer stated in calling for the vote that what the Chicago contractors were doing affected every sheet metal contractor in the state.

George Harms, of F. Meyer and Brothers Company, was then called upon to tell about the trade school



James Barrett,
Re-elected Treasurer.

which the Peoria Local has arranged for at the Bradley Polytechnic School in that city.

Mr. Harms said that this Peoria Local is underestimating the salary of an experienced sheet metal instructor who has had real practical experience in the work, is furnishing the necessary tools and material.

It is necessary, however, he said, that the contractors throughout the state—and in other states—take an active interest in this work, to the extent that they wish to make it a point to induce boys and young men to take this course.

George Foster, Springfield, called attention to the fact that unless the sheet metal contractors saw to it that apprentices be properly trained—practically as well as theoretically—in sufficient numbers to at least fill the places of the workmen who die or quit this work, very soon there will be a real shortage of sheet metal workers.

Young men and boys should be shown that there is not only dignity to the sheet metal trade, but also high wages. But it is up to the bosses, themselves, he concluded.

Banquet Big Success.

The annual banquet, served at Hotel Orlando, under the auspices of the Travelers' Auxiliary, was a big success. Nearly 175 members and friends—quite a number of ladies being present—sat down at 6:30 Wednesday evening to a splendid dinner which was followed by a short program of speeches and a



Joseph Pearson.
Retiring Vice President.

long program of high class entertainment.

Walter L. Dennis, President of the Decatur Local, acted as toastmaster and L. A. Denoyer, President of the Auxiliary, delivered a fine address of welcome, followed by

an address by John J. Richerson, superintendent of the Decatur Schools.

The big feature of the entertainment was the TeeBee specialty by Trow. Warner, Bill Laffin and Dave Farquhar. As usual, wherever this act has been produced it was received with great applause and thoroughly enjoyed.

Lou Denoyer may not be an Adonis, although there are those who say that before his forehead began to slip back he was quite a good looking fellow, but he certainly knows how to get people to work with him.

The arrangements for the banquet which were made by the Entertainment committee of the Auxiliary and the Decatur Local acting as a unit, were simply fine and everything went off in ship-shape manner, for which due credit was given by a rising vote of thanks.

The Auxiliary Entertainment Committee was composed of L. A. Denoyer, Frank I. Eynatten and Oliver T. Ingledeew.

Roy R. Wilson acted as Chairman of the Decatur Local, the other members being President W. L. Dennis, Vice-President L. R. Hamman, Secretary Robert Campbell, Treasurer William M. Grubbs, William T. Seyfer, Fred W. Schlie, Fred Ferguson, Herman Grebb and Robert H. Gibson.

Those cowbells distributed by the Meyer furnace boys certainly made a hit and it was "Jingle bells, jingle bells" all evening.

A handy memo book or watchfob was at each plate with compliments of the "Frank Rank" folks.

If the sheet metal ladies ever get to smoking cigarettes they will make life hard for the "Armco" salesmen, for there was much favorable comment on the flavor of the new "Armco" coffin nails.

Thursday Morning.

Owing to the absence of Harry M. Snow, who was to have spoken on "Furnace Fans," R. M. Menk was asked to substitute. Mr. Menk, however, advised that inasmuch as he is on the program of the National Warm Air Heating and Ven-

tilating Association Annual Convention for a talk on "Furnace Fans," he hardly believed it advisable to make a regular address on this occasion, but suggested that members watch for his paper which would be published in AMERICAN ARTISAN,



Charles N. Louis.
Director.

as undoubtedly all read this trade paper. One thing, he urged the installer not to forget and that is—regardless of the advantages of a fan or blower, it is still essential that ideal furnace installation be adhered to. In other words, that gravity circulation is nature's way and the advantages are only produced by the fan or blower in proportion to how near the gravity installation is made in conformity with nature's laws.

He also pointed out that sheet metal workers who only install an occasional furnace would be better off if they submitted plans or sketches to the furnace or furnace pipe manufacturer rather than take a chance on making an estimate and possibly losing money on the job. Further, that unless they are up on the modern practices of furnace installation, in addition to losing money, there is also the possibility of the installation not producing satisfactory results. In other words, they should not take a chance, for failure to produce a satisfactory job and possibly losing money would injure the furnace industry and themselves, making it far better not to have taken the job in the first place. Mr. Menk also spoke briefly

about the work of the Research Bureau at the University of Illinois, and advised following the university reports more closely and carefully than they had ever done before, as these reports are of vital importance to every installer.

George Harms Followed Menk's Talk with "Profits."

Profits are obtained through the selling of labor, merchandise or commodities at a price above the cost of production and expense. I believe this can be summarized as follows: First, to buy right; secondly, to spend right; thirdly, to sell right; fourth, to collect right.

To buy right is of great importance, but is very often misunderstood. Many believe that the only thing to be considered in buying is the price, and if they can buy cheaper than someone else, irrespective of quality, they have then accomplished something. Although the price must always be considered, quality is of more importance than the price.

To buy right, it is also necessary to buy at the right time, and in the right quantity. If it were possible to always obtain goods just at the time when you need them, then this would be the only proper time, but it is often necessary to anticipate your requirements, and purchase long before the goods are actually used and in such cases the quantity purchased is of great consideration.

To obtain the right price, it is often necessary to purchase in large quantities at a time when there is very little use for the material and very much thought must be given to the purchase of materials, being very careful not to overbuy and it is almost as disastrous to buy in too small quantities.

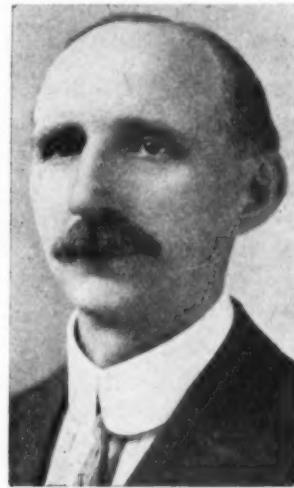
Next, I said is to spend right. By this I mean the expense connected with the business. Although this should always be kept to the minimum, there are times when it is very profitable to increase your expenses. Your expenses should always be regulated to the size of your business.

Small business cannot afford heavy expenses and large businesses are often in danger of reducing their

expenses beyond their requirements.

Next, is to sell right. If you buy and spend right, you will hardly go wrong in selling, as you will buy good goods at the right price and spend according to your requirements and will, therefore, certainly know your costs and your selling price will be in accordance.

Next, is to collect right. Here is where most business men stumble. They may be good buyers, know their expense and sell at a profit, but they utterly fail as collectors. Although I mention this as the last item in obtaining profit and it is in



George Harms.

reality the last thing connected with the transaction, it, however, is of first importance.

If your collections are not made in accordance with terms of sale, you will very easily lose a part or the whole of the account, and although these purchasers will still continue buying goods and pay cash, this money will not come to you, but to others. A satisfied customer is he who obtains the right quality, good treatment and who has paid his account. If you will, therefore, analyze your business and learn whether or not you are conducting it along the lines mentioned above, I am quite sure that you will not fail of success.

Tell Me Not.

Tell me not in smiling numbers
Selling costs are what they seem,
And the man who cuts for orders
Gets the Lion's share of the cream.

If you strive to build a business
Do not be a human sieve,
Letting leak your needed profit,
Trusting luck will let you live.

Lives of "dead ones" all remind us
What it means to sell on guess—

Their departing makes us keener
To sell **RIGHT** and not sell **LESS**.

Get your costs as low as may be,
Let your profit be what's fair;
Then will men know where to find you
And will help to keep you there.

For no trade can long be loyal
To a man who's "all regrets"—
Can't deliver—who's just living
On the interest of his debts.

Live and laugh and work and prosper;
Know your costs and sell at gain;
And continue doing business
When price "busters" split in twain.

Owing to the illness of R. J. Jobst, who was scheduled to speak on "Erection of Metal Ceilings," Charles H. Robinson, Springfield, handled his subject and he stated that under ordinary circumstances \$14.00 per square would yield a fair profit. Discussion brought out that prices ranged as low as \$12.00 and as high as \$25.00 per square for special work.

The question box was next opened and A. G. Pedersen, of AMERICAN ARTISAN AND HARDWARE RECORD, took charge.

The principal question pertained to the matter of overhead expense and records.

Reference was made to Mr. Young's splendid paper at the Michigan Sheet Metal Contractors' meeting, and also to the articles on accounting which appeared recently in AMERICAN ARTISAN AND HARDWARE RECORD by George R. Doyle. There was considerable discussion and favorable comment of the forms proposed by Mr. Doyle and which can be had from the AMERICAN ARTISAN.

Thursday Afternoon.

Thursday afternoon's session opened with the report of Secretary Fred C. Gross, and which is given herewith.

Secretary's Report.

This being the Tenth Anniversary of the Organization of the Illinois Sheet Metal Contractors' Association a brief summary of the past ten years and what has been accomplished in that time, especially the last year, I believe, will be of some interest to you.

The first meeting was held at Peoria, February 11, 1914, at which only officers were elected. Followed April 8, 1914, also at Peoria by the First Annual Meeting. At this meeting Constitution and By-Laws

were adopted and a start with forty-four members.

In 1915 a gain of 5 per cent was made. In 1916 a gain of 10 per cent. In 1918 a gain of 26 per cent. In 1919 a gain of 30 per cent. In 1920 a gain of 5 per cent. In 1921 a gain of 33 per cent. In 1922 we gained about 40 members, or about 25 per cent, so that the membership today is 195.

On October 9th President Hermsdorfer and myself made the trip to Decatur and organized a Local Association, electing their officers and getting them started onward; this membership totaled nine.

March 8th, President Hermsdorfer and myself went to Danville, called a meeting at the Plaza Hotel and it is a pleasure to say that we had an attendance of eleven. We at once proceeded to elect their officers and the Danville Local started out with a set of officers, who, I have reason to believe, will make of that local one of the best in the state and since we elected them in the State Association they have added two members making a total of thirteen.

Special mention is made of our good friend, Griff George, who was instrumental in getting four members at Paris, and also of the Rock Island-Moline Association, which added two members to their membership.

Now, for a few recommendations: I believe that it would be advisable to select a permanent organizer who could also act as secretary, the matter of compensation to be decided on by your board of directors. There are something like twenty-three hundred sheet metal shops in Illinois and I believe they could be convinced that it would be to their interest to have membership in the State and National Association.

In conclusion, I wish to thank all of the officers and members for their cooperation and support in my behalf, and in this spirit looking only for the good of the entire membership of the Sheet Metal Contractors' Association I feel that success will be ours.

Following the report of the secretary, come the committee reports and election of officers.

Report of Resolution Committee.

With reference to the resolution presented by the Travelers' Auxiliary regarding permanent convention headquarters.

Be it resolved that the consideration of this request be deferred and taken up in open session at the next annual convention. We consider this of vital importance to warrant a thorough discussion of same.

We have considered the proposition of charging a registration fee and believe this to be for the best interest of all concerned, and believe that a fee of \$3.00 is not excessive and recommend that this resolution be adopted.

The erection of hollow metal doors, windows and trim should be done by Sheet Metal Workers, as we consider this a part of this industry. We, therefore, commend the actions of Harry C. Knisely and George Teschmacher, who have so ably presented this matter to the National Board of Jurisdictional Awards and recommend that a committee be appointed to keep in close touch with the situation and represent this organization at any future meetings.

Resolved, that a vote of thanks be extended to his honor, Mayor Borchers, to the Decatur Local, to the Travelers' Auxiliary, to the Press and Trade Papers for their part in making this convention a success, and to Prof. Richeson for his able and interesting address at the banquet.

Resolved, that a vote of thanks be extended to President Hermsdorfer and all the officers of this Association for their untiring efforts during the past year. The good showing in increased membership is largely due to their persistent work.

Whereas, Mr. H. C. Knisely reported on the labor conditions in Chicago, showing the determined stand our members had taken in the controversy,

Resolved, that we heartily endorse the action and assure them support.

Following the report of committee, E. B. Langenberg spoke on the "Standard of Furnace Installation."

The officers elected were as follows:

President—A. J. Hermsdorfer, Quincy, Illinois, re-elected.

Vice-President—Charles H. Robinson, Springfield, Illinois.

Secretary—Fred C. Gross, Quincy, Illinois, re-elected.

Treasurer—James Barrett, Alton, Illinois, re-elected.

Directors—G. J. George, Charles N. Louis and Harry C. Knisely, Chicago.

The board of directors was authorized to expend \$300 to defray part of the cost of a membership campaign which it is expected will be put on this summer.

The selection of the next convention city was left to the board of directors.

Sam P. Burgess Elected President of Illinois Auxiliary.

At the annual meeting of the Travelers' Auxiliary of the Illinois Sheet Metal Contractors' Association which was held at Hotel Orlando, Decatur, April 5th, the reports of Secretary Eynatten and Treasurer Sauer showed that after paying all bills there is still a good balance in the treasury and also that the membership is growing.

All the officers were re-elected, except President Denoyer, who refused to accept office again, and George B. Carr, whose place as Sergeant-at-Arms was filled by A. G. Pedersen.

President—Sam P. Burgess, Rock Island, Illinois.

Vice-President—Oliver T. Ingledew, Chicago.

Secretary—F. I. Eynatten, Peoria, Illinois.

Treasurer—John B. Sauer, Peoria, Illinois.

Sergeant-at-Arms—A. G. Pedersen, Chicago, Illinois.

The board of directors of the Auxiliary are to be appointed later by the president.

Resolutions of appreciation were passed for President Denoyer, other

officers and the Tee Bee vaudevillians, Trow Warner, Bill Laffin and Dave Farquhar, also for the Decatur Local.

The Auxiliary members who were hosts at the banquet Wednesday were:

G. A. Hoskins, St. Louis, National Lead Company.

J. F. Cross, Indianapolis, Standard Metal Company.

R. W. Menk, Chicago, Illinois, Excelsior Steel Furnace Company.

Harry C. Knisely, Chicago, Illinois, H. C. Knisely Company.

Wesley J. Johnson, Chicago, Illinois, Carr Supply Company.

C. B. Noyes, Peoria, Illinois, Success Heater and Manufacturing Company.

D. R. Farquhar, Chicago, Tuttle & Bailey Manufacturing Company.

M. L. Armentrout, Rock Island, Illinois; R. J. Rush, Davenport, Iowa, and Charles H. Kellerstrass, Kansas City, Nichols Wire, Sheet and Hardware Company.

Harry W. Sackriter, Decatur, Illinois, Wonder Furnace Company.

Thomas W. Pearson, Chicago, W. E. Lanneck Company.

Joseph Farris, Springfield, Illinois, Farris Furnace Company.

Arthur W. Wiechert, Belleville, Illinois, St. Clair Foundry Corporation.

W. H. Margenau, St. Louis, American Rolling Mill Company.

S. E. Brownlee, Decatur, Illinois, Wonder Furnace Company.

F. A. Rodgers, St. Louis, National Paint & Varnish Company.

Paul F. Grubbs, Indianapolis, Follansbee Brothers Company.

F. A. Wilkening, Indianapolis, Standard Metal Company.

W. L. Coppenbarger, Chicago, Premier Warm Air Heater Company.

O. Voorhees, Indianapolis, 20th Century Heating & Ventilating Company.

Trowbridge A. Warner, Chicago, Tuttle & Bailey Manufacturing Company.

William Wrede, Moline, Illinois, Republic Metalware Company.

The Beckwith Company, Dowagiac, Michigan.

W. M. Bivens, Decatur, Illinois, American Foundry & Furnace Company.

R. W. Blanchard, Chicago, Hart & Cooley Company.

Fred Bloomfield, Chicago, The Manny Heating & Supply Company.

S. P. Britt, Rantoul, Illinois, The Lennox Furnace Company.

Sam P. Burgess, Rock Island, Illinois, Rock Island Register Company.

George B. Carr, Chicago, Carr Supply Company.

Etta Cohn, Chicago, AMERICAN ARTISAN & HARDWARE RECORD.

Thomas W. Cox, St. Louis, Haynes-Langenberg Manufacturing Company.

L. A. Denoyer, Chicago, Canton Art Metal Company.

C. C. Lund, Chicago, Joseph T. Ryerson & Son.

Franklin V. Elder, Peoria, Illinois, Wheeling Corrugating Company.

E. C. English, Chicago, The Sykes Company.

F. I. Eynatten, Peoria, Illinois, A. B. Bushell & Son.

A. L. Friedley, Chicago, Friedley-Voskhardt Company.

Julius Gerock, Jr., St. Louis, Gerock Brothers Manufacturing Company.

E. E. Gilson, Quincy, Illinois, Quincy Metal Company.

Charles E. Glessner, Chicago, Excelsior Steel Furnace Company.

E. E. Griffith, Indianapolis, Tanner & Company.

D. M. Haines, Chicago, The Haines Company.

George Harms, Peoria, Illinois, F. Meyer & Brother Company.

Wm. G. Harms, Rock Island, Illinois, Rock Island Register Company.

H. R. Harrison, Dowagiac, Michigan, Rudy Furnace Company.

J. G. Henninger, Cleveland, J. M. & L. A. Osborn Company.

J. G. Holch, Gilman, Illinois, Milwaukee Corrugating Company.

Oliver T. Ingledew, Chicago, Scully Steel & Iron Company.

International Heater Company, Chicago.

P. A. Johnson, Peoria, Illinois, Charles Johnson Hardware Company.

Wm. T. Kelley, Chicago, Scully Steel & Iron Company.

A. E. Ketchum, W. Chicago, Illinois, Wheeling Corrugating Company.

William P. Laflin, Chicago, Tuttle & Bailey Manufacturing Company.

E. B. Langenberg, St. Louis, Haynes-Langenberg Manufacturing Company.

John M. Lorenz, Chicago, Chicago Furnace & Supply Company.

R. E. Mackey, St. Louis, Stockhoff Supply Company.

Harvey J. Manny, Chicago, The Manny Heating & Supply Company.

Harry G. Masten, Chicago, Lincoln Steel Company.

D. M. Morphy, DeKalb, Illinois, Utica Heater Company.

F. D. Naylor, Milwaukee, Wisconsin Corrugating Company.

E. A. Nebel, Cleveland, Nebel Manufacturing Company.

H. J. Niehaus, Indianapolis, Follansbee Bros. Company.

E. W. Norman, Indianapolis, Merchant & Evans Company.

A. G. Pedersen, Chicago, AMERICAN ARTISAN & HARDWARE RECORD.

James L. Perkins, 140 South Dearborn Street, Chicago.

M. L. Purdom, St. Louis, Hammond Sheet Metal Company.

O. H. Bourscheid, Chicago, A. M. Castle & Company.

A. J. Robinson, Quincy, Excelsior Stove Manufacturing Company.

B. J. Russell, Chicago, Joseph T. Ryerson & Son.

John B. Sauer, Peoria, Illinois, Meyer Furnace Company.

A. H. Schiwe, Springfield, Illinois, The Berger Manufacturing Company.

George B. Schneider, Peoria, Illinois, Clark-Smith Hardware Company.

Edwin A. Scott, New York City, Edwin A. Scott Publishing Company.

Charles Spindler, Peoria, Illinois, F. Meyer & Brothers Company.

W. H. Symonds, St. Louis, Symonds Register Company.

R. Tenk, Quincy, Illinois, Tenk Hardware Company.

L. G. Whitmer, Bloomington, Illinois, American Foundry & Furnace Company.

H. E. Williams, Bloomington, Illinois, Wise Furnace Company.

Roy O. Wilson, Bloomington, Illinois, May-Fiebecker Company.

Blake S. Wright, Indianapolis, Merchant & Evans Company.

Joseph B. Chandler, Chicago, Republic Metalware Company.

McHenry, J. M., St. Louis, Bridge & Beach Manufacturing Company.

Morse, Frank H., Chicago, Hart & Cooley Company.

Norris, Robert F., Peoria, Illinois, Chapman-Price Steel Company.

Debchett, John, Jr., Columbus, Ohio, Houston Brothers Company.

Noyes, C. B., Peoria, Illinois, Success Heater & Manufacturing Company.

Cincinnati Sheet Metal

Men to Meet April 10

You Are Invited.

J. A. Stermer, Secretary of the Sheet Metal Contractors' Association of Cincinnati, extends a cordial invitation to you to attend the next regular meeting of the Association Tuesday night, April 10, as follows:

"If you happen to be in Cincinnati on Tuesday, April 10th, the Sheet Metal Contractors' Association of Cincinnati and vicinity extend to you a most welcome invitation to attend their next Regular Meeting on Tuesday night, April 10th, at the Ohio River Launch Club.

"Dinner will be served promptly at 6:30 p. m., and your early acceptance will be appreciated by the committee.

"Matters pertaining to the coming State Convention will be discussed at this meeting, and our Association will be very glad to have any suggestions you may have to offer.

J. A. STERMER,
Secretary."

Production of Metal Products Increases in Volume.

According to the reports submitted by the American section of the International Chamber of Commerce, in session at Rome, on American economic conditions, American business is progressing through increased production rather than through increased prices or an increased use of credits.

The survey, as submitted, indicates that February of this year apparently saw a production rate achieved in basic industries which surpasses any previous record, except for a month in 1917.

Taking the comparative figures of the metal and metal products and those of the farm products, which

are given in index numbers for wholesale prices by groups of articles, and using 100 as the price before the war, it is found that the highest point reached by these two during or since the war was 247 for the farm products and 292 for the metal and metal products.

The relative advance in the prices of the two products mentioned heretofore which had occurred to February 1, 1923; that is, from January, 1922, to January, 1923, shows

that metal and metal products have kept pace with the farm products, as the advance in the former, being from 112 to 133, was equal to that of the latter, which was from 122 to 143. This shows a total advance in both cases for the period mentioned of 21. This is indicative of the progress which is being made in the metal and metal products line, as everyone knows that farm products are considered to be one of the primary basic industries.

material used in experimental work; materials used for patterns; furnishing sound glass to replace defective glass.

Shop supplies such as charcoal, small tools, dies, brushes, brooms, floor mops, dusters, soap, towels, oil cans, measures, greases, oil paint, enamels, varnishes, pumice stone, sand and emery paper, filling, putty, in fact all miscellaneous supplies required which can not be charged to Direct Material or supplies.

Note: Any labor involved in connection with "Indirect Material" should be charged under "Indirect Labor."

Indirect Labor.

This means non-productive labor. Superintendent's; foreman's, inspector's, factory clerks; watchman's salaries.

Machinist's salary, when same can not be charged direct to the salable product, or in other words, to direct labor.

Die-maker's salary, when same can not be charged direct to salable product, or in other words, to direct labor.

Salaries paid for repairing or rectifying mistakes, or defective products.

Salaries paid for experimental work.

All moneys paid out in salaries for lost time allowable by law for voting or other legal requirements, lost time caused through temporary stoppage of power or light, lost time caused through errors either by omission or commission, all lost time caused by personal necessity, accident, or other unforeseen causes.

All moneys paid out in salaries for elevator operators, porters, janitors, errand messengers, etc.

Indirect Expense.

Rent, fire insurance, workingmen's liability insurance, factory group insurance, ambulance, medical and surgical first aid to injured, taxes—municipal, county, state, and federal, factory license, interest on investment.

Depreciation of buildings, boilers, or other heating apparatus, elevators, heat and light fixtures, shelving and racks.

Knisely Shows Relation of Total Cost to Prime Cost and Burden or Overhead Expense.

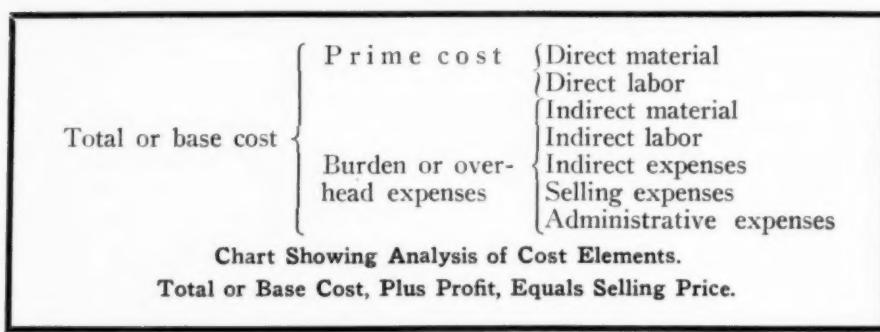
Says Burden or Overhead Expense Should Be Based on Direct Labor Only, Not on Prime Cost.

HARRY C. KNISELY, president of the Sheet Metal Contractors' Association of Chicago, shows members of the Illinois Sheet

Direct Labor.

(This means productive labor.)

Under this heading should be charged that portion of factory



Metal Contractors', in convention at Decatur, Illinois, April 4 and 5, how total or base cost, plus profit, equals selling price.

Direct Material.

This item should contain cost of all materials used in making up (fabricating) the salable product, such as: Sheet metal; solder, flux, welding wire, screws, bolts, nuts, rivets, etc.; sheet asbestos mill board; mineral wool, cork, or other fillings; name plates and underwriters' labels; reinforcing plates of every description; glass and putty; hardware, sash chain, pulleys, weights, etc.

There will be necessarily some waste and defective materials, which should be carefully itemized under separate heading titled "Indirect Material."

wages which is productive in character and which may be applied directly to the product, also direct labor employed setting glass.

There is necessarily some non-productive labor involved, which should be carefully itemized under heading titled "Indirect Labor." Care must be taken that non-productive labor is not charged under the heading of direct labor.

Indirect Material.

This means all material which can not be applied in a direct manner, such as loss or waste of solder, flux, acid, welding wire; loss of and defective screws, bolts, nuts, washers, rivets, nails, hooks, eyes, etc.

New hardware and parts thereof, required to replace defective hardware, scrap material; material used in rectifying defective products; ma-

Depreciation of engines, motors, belt or motor driven machinery, line shafting, hangers, pulleys, belting, dies, machine and hand tools.

Maintenance, repairs and renewals of all items covered by paragraph.

Note: Include all new material and labor required for maintenance.

Power, light and heat; steam, electricity, coal, gas and light bills covering the items of power, light and heat. To this must also be added the stationary engineer's and fireman's salaries, cleaning and upkeep of lamps, electric lights, gas lamps, globes, etc.

Donations—charity, civic advancement, welfare and relief work.

Trade papers, periodicals and daily trade reports, "Sweet's Trade Catalogue."

Drafting or engineering department—draftsmen's or engineer's salaries, also all clerk hire in connection with this department, also all drafting room supplies. Depreciation, maintenance, and renewals of all apparatus in connection with this department.

Cartage—all vehicle licenses, automobile licenses, auto truck licenses, driver's licenses, teamsters', chauffeurs and auto truck drivers' salaries and all helpers' and loaders' salaries, automobile mechanics' salaries, all stable or garage expenses including greases, oils, sponges, chamois, horseshoeing, harness, feed, gasoline, tires, and other auto accessories, all vehicle, automobile, auto truck, fire and accident, burglary or any liability traffic insurances. Depreciation, maintenance, repairs and renewals of vehicles, automobiles, auto trucks and all accessories thereto.

Miscellaneous expense—watchman's station clock, keys, gun, mace, lantern or flash torch, police and fire call service, Western Union clock and other call service.

Collector's salaries, commissions or fees, collection allowance. This means where deduction must be allowed to obtain settlement.

Discredited accounts—bad debts not considered collectible.

Street car fare and sundry ex-

pense for inspectors, superintendent and workingmen, when in connection with contract or ordered work being fabricated, or installing of same.

Stock room expense—including stockkeeper's and assistant's salaries, freight and cartage inward (when not considered part of direct material charge).

Depreciation, maintenance, repairs and renewals of all stock room equipment.

Court fines assessed for alleged infraction of traffic regulations or alleged misdemeanors.

All moneys paid out for window cleaning, scrubbing, renovating and up-keep.

All moneys paid out for ice, entertainment, etc., where employees derive the direct benefit.

All deficits caused by the up-keep of restaurants, recreation room, supplies all attendants.

Note: Every item of factory expense whether enumerated in the foregoing or not, should be carried under the head of "Indirect Expense."

It must be borne in mind, however, that one must not confuse productive and non-productive labor as factory expense. Both productive and non-productive labor do become part of the factory cost, as will be seen by referring to chart showing analysis of cost elements.

Selling Expense.

Salesmen's salaries.

Estimators' salaries.

Commissions—this means bonuses paid to salesmen, estimators, or others who consummate sales.

All advertising costs such as periodicals, catalogues, pamphlets, or like matter.

Sample expense—this means samples which are made up for exhibition purposes or carried by salesmen.

Salesroom expense.

Salesmen's traveling expenses, local or foreign.

Estimators' traveling expenses, local or foreign.

All moneys paid out as premiums on bonds.

Finished stock warehouse ex-

pense—this would also mean stock that is finished which takes up valuable space on the floor while awaiting shipment or erection.

Freight and cartage outward.

Shipping department expense, including shipping clerk's and assistant's salaries and all metal or lumber used for boxing, crating or bracing, nails, wire, burlap, paper, excelsior, etc.

Administrative Expense.

Officers' salaries—if in partnership or individual, the part each draws; auditing expenses; legal expenses; executive expenses; administrative office expense; bookkeeper's salary; stenographers' salaries; other clerks' salaries; telephone and telegraph service; telephone switchboard operator's salary; printing and stationery; postage; mercantile reference subscription and reports; traveling expenses when not in connection with selling; office supplies.

Depreciation, maintenance, repairs and renewals of furniture, vaults, safes and all office equipment.

Expenses incident to stockholders', directors' and other meetings and entertainment not otherwise provided for.

1922 Copper Production Shows Gain.

Smelter production of copper in the United States in 1922 is estimated by the geological survey to have been 981,000,000 pounds, an increase of 475,000,000 over 1921. The total production of new refined copper from domestic sources is placed at 897,000,000 pounds, a gain of 288,000,000 pounds over 1921. Refinery production of new copper both from domestic and foreign sources, including imports, in 1922 was about 1,398,000,000 pounds.

Refineries also had an output of 112,000,000 pounds of secondary copper last year, bringing the total for the refineries up to 1,510,000,000 pounds. Stocks of refined copper in the hands of domestic refiners on December 31 are estimated as 277,000,000 pounds, against 459,000,000 pounds on December 31,

1921. Blister copper in transit, in process of refining or in the hands of smelters on December 31 is believed to have totaled 352,000,000 pounds, a gain of 69,000,000 pounds over December 31, 1921.

Notes and Queries

Address of American Stove Company.
From Wagner and Sleep, Darlington, Wisconsin.

Will you kindly let us know where the American Stove Company is located.

Ans.—Lorain, Ohio.

"Burt" Ventilator.
From Hammond Sheet Metal Company, Second and Cass Avenue, St. Louis, Missouri.

Please advise us who makes the "Burt" ventilator.

Ans.—The Burt Manufacturing Company, 40 Main Street, Akron, Ohio.

To Manufacture Metal Novelty.
From Daniel A. Lindsey, Lindsey, Gillock Company, Nashville, Tennessee.

Can you tell me who is in a position to manufacture a metal novelty for us.

Ans.—Wisconsin Metal Manufacturing Company, Chippewa Falls, Wisconsin.

"Globe" Ventilator.
From Hammond Sheet Metal Company, Second and Cass Avenue, St. Louis, Missouri.

Please inform us who makes the "Globe" ventilator.

Ans.—Globe Ventilator Company, Troy, New York.

"Fuller-Warren" Furnace.
From Mississippi Valley School Supply Company, 1017 Forest Avenue, St. Louis, Missouri.

We should like to know who makes the "Fuller-Warren" furnace.

Ans.—The Fuller-Warren Company, Troy, New York, and Milwaukee, Wisconsin.

Brass Can Screws.
From George B. Ratcliffe, 1067 6th Street, Milwaukee, Wisconsin.

Can you tell us who makes brass can screws.

Ans.—Reed and Prince Manufacturing Company, Worcester, Massachusetts; Batavia Brass and Iron Novelty Works, Batavia, New York,

and Hero Manufacturing Company, Westmoreland Avenue and Stokley, Philadelphia, Pennsylvania.

Galvanizing Outfit.

From A. Elbling and Sons, 77 South Parke Street, Ponitiac, Michigan.

Please tell us who makes an outfit for galvanizing all kinds of metal, such as pails, garbage cans, wash tubs, etc.

Ans.—Callender Soldering Process Company, 14 South Jefferson Street, Chicago, Illinois.

"National" Furnace.

From Mississippi Valley School Supply Company, 1017 Forest Avenue, St. Louis, Missouri.

Who makes the "National" Furnace?

Ans.—Excelsior Stove and Manufacturing Company, Quincy, Illinois.

Address of Victor Heater Company.
From St. Ansgar Tinshop, St. Ansgar, Iowa.

Will you kindly advise us where the Victor Heater Company is located.

Ans.—Marshalltown, Iowa.

Small Air Pump.

From W. F. Kasbohm, Van Wert, Ohio.

Can you tell me who makes an air pump $\frac{3}{4}$ inch in diameter and 1 inch stroke.

Ans.—Beach-Russ Company, 38 Church Street, New York City.

"Royal" Furnace.

From Mississippi Valley School Supply Company, 1017 Forest Avenue, St. Louis, Missouri.

We should like to know who manufactures the "Royal" furnace.

Ans.—The Hart and Crouse Company, Utica, New York.

Lead Channels.

From Lincoln Radiator Shop, 211 South Kickapoo Street, Lincoln, Illinois.

Can you tell us where we may buy lead channels such as are used in making leaded windows.

Ans.—Gardiner Metal Company, 1366 West Lake Street, Chicago, Illinois.

Colored Art Glass.

From Lincoln Radiator Shop, 211 South Kickapoo Street, Lincoln, Illinois.

Please advise us where we may secure colored art glass, such as are used in church windows.

Ans.—Giannini and Hilgart, 112 East South Water Street, and Rawson and Evans Company, 710 West

Washington Boulevard; both of Chicago, Illinois.

Sand Screen.

From Bogue and Johnson, Beresford, South Dakota.

Where can we buy 32 lineal feet of sand screen 46 or 48 inches wide, to be of No. 3 mesh galvanized wire.

Ans.—Fred. J. Myers Manufacturing Company, Hamilton, Ohio; The W. S. Tyler Company, Cleveland, Ohio, and F. P. Smith Wire and Iron Works, Fullerton and Clybourne Avenues, Chicago, Illinois.

"Never Fail" Oil Cans.

From J. A. Van Pelt, Morrilton, Arkansas.

Kindly inform me who makes the "Never Fail" oil cans.

Ans.—J. A. Harps Manufacturing Company, Greenfield, Ohio.

Radiators for Wilcox Truck.

From Otto Schuman, Wisconsin Rapids, Wisconsin.

Who makes radiators for the Wilcox Truck?

Ans.—The G. and O. Manufacturing Company, Replacement Department, New Haven, Connecticut, and F. L. Curfman Manufacturing Company, Maryville, Missouri.

Machine for Cutting Louvers.

From Otto Schuman, Wisconsin Rapids, Wisconsin.

Can you tell me who makes a machine for cutting louvers in automobile hoods.

Ans.—Joseph T. Ryerson and Son, 2558 West 16th Street, Chicago, Illinois.

Electric Furnaces.

From The Ruth Dredger Manufacturing Company, Post Office Box 260, Huntington Park, California.

Please advise us who makes electric furnaces.

Ans.—Pittsburgh Electric Furnace Company, Pittsburgh, Pennsylvania; Detroit Electric Furnace Company, Detroit, Michigan, and Electric Furnace Company, Salem, Ohio.

Fishing Reels.

From Denkman Hardware, Geddes, South Dakota.

Can you tell us who makes: 1. "Pflueger", 2. "Free Spool", 3. "Anti-Back-Lash", 4. "Level-Winding" fishing reels.

Ans.—1. Enterprise Manufacturing Company, Akron, Ohio. Numbers 2, 3 and 4 are made by Redifor-Beetzsel Company, Warren, Ohio.

Events and Progress of the Hardware Trade.

What the Retailers, Jobbers and Manufacturers Are Doing. Latest Selling Methods and Experiences of Successful Men.

Old Guard Hardware Salesmen Will Meet in Jacksonville, April 25th.

In the following open letter President George H. Harper, of the Old Guard Southern Hardware Salesmen, urges a full attendance at the annual meeting which is to be held April 25 at Hotel Windsor, Jacksonville, Florida, during the conventions of the American Hardware Manufacturers' and the Southern Hardware Jobbers' Associations:

Members have doubtless made plans to attend the conventions and I hope that you will give one hour of your time in Jacksonville to the meeting of the Old Guard.

Mr. Charles H. Ireland, Greensboro, North Carolina, I am pleased to announce, has consented to address our organization. Mr. Ireland is very close to the jobbers, manufacturers and members of the Old Guard and I am sure that his message will be worth while.

Come to Jacksonville—and let us make this our biggest and best gathering.

Cicero-Chicago Corrugating Company Perfects Ringer Signal File.

The Cicero-Chicago Corrugating Company, Cicero, Illinois, have perfected the Ringer signal files. This file is used for filing invoices, letters, orders, quotations, and all correspondence which is generally filed in drawers or boxes.

Some of the advantages of this file are that the folders which are inside of each case show the word *out* when one of the folders is removed. The action is automatic; this insures against mistakes in filing, and shows the proper place to replace the folder removed instantly; they are so constructed as to require a minimum of floor space, which is

a big item for any large concern, yet the small concern can place them in the most convenient place, such as on top of a desk or on a table; any papers wanted can be seen at a glance, because of the prominent headings in front of each case.

Preparing for the Spring Paint and Varnish Season.

During the months of April and May America's fancy lightly turns to thoughts of cleaning up and painting up. The housewife thinks of interior decorating, while her husband is trying to decide what color to make the old car this season.

Perchance they have asked your advice on the subject, but in all events here is a good chance to work up an excellent paint trade.

It is not infrequent that dealers catering to the paint trade adopt the plan of having neat paint cards printed which are inserted in parcels purchased at the store. This is one of the best forms of advertising paints, as in this way you are sure that the card reaches its proper destination; it is even better than the direct mail method.

Some dealers have been known to distribute small samples of paint with instructions telling how to use the paint. This method rarely fails to create a demand for larger quantities because once a person becomes interested in painting a few articles, he usually wishes to continue the good work, the contrast between the painted and unpainted surfaces being so glaring.

See to it that your stock is made up of good lines, and once you get people to use your paint you will not lose their trade. Set a good example by painting the front of your store and keep it painted.

It frequently happens that people

are compelled to wait their turn in the store. Under these circumstances they will fasten their attention upon almost anything that attracts their attention and holds their interest. If, while you are looking over the various magazines, you run across a good, live ad showing paints, take it to the store and permit it to lie open at the right place in some convenient location in the store. The book will be found to become well thumbed in the course of a short time and this will give the salesman an opportunity of introducing the subject of painting.

Salesmen should be thoroughly instructed in all of the qualities and uses of the various paints, as these men are often called up to assist patrons in choosing the correct color combinations. If the salesman possesses a thorough knowledge of the variety of paint he is trying to sell he can generally convince a prospective customer of its superior merits over a competitor's brand when there is a predisposition on the part of the customer for the latter. Here is where the character of the firm and the brand of paint come in for a test. If the brand is a good one and stands up well, you will make more sales, but if it falls down you are in for some warm criticism.

If the salesman believes in the goods he is trying to sell, he will make sales easier than if he does not, and it therefore behooves you to encourage him to make a thorough study of his product.

Scully-Jones & Company Out with New Catalogue.

The Scully-Jones & Company, 2012 West 13th Street, Chicago, of which O. Maisch is superintendent, have issued their "Wear-Ever" tool catalogue. The former address of the firm was Railway Exchange Building, Chicago.

Tool Display Wins First Prize, \$50 Cash, in American Artisan And Hardware Record Window Competition.

H. F. Westcott and John Niemi Carry Off "Stakes" With Display of Small Tools, for L. E. Swift Company.

Unique Tool Display Wins First Prize.

The accompanying photograph is a reproduction of the unique tool window display which won the first prize, \$50 cash, in the AMERICAN ARTISAN AND HARDWARE RECORD

this time, when the spring outdoor work is getting under way.

The description of the window as submitted by the designers is substantially as follows:

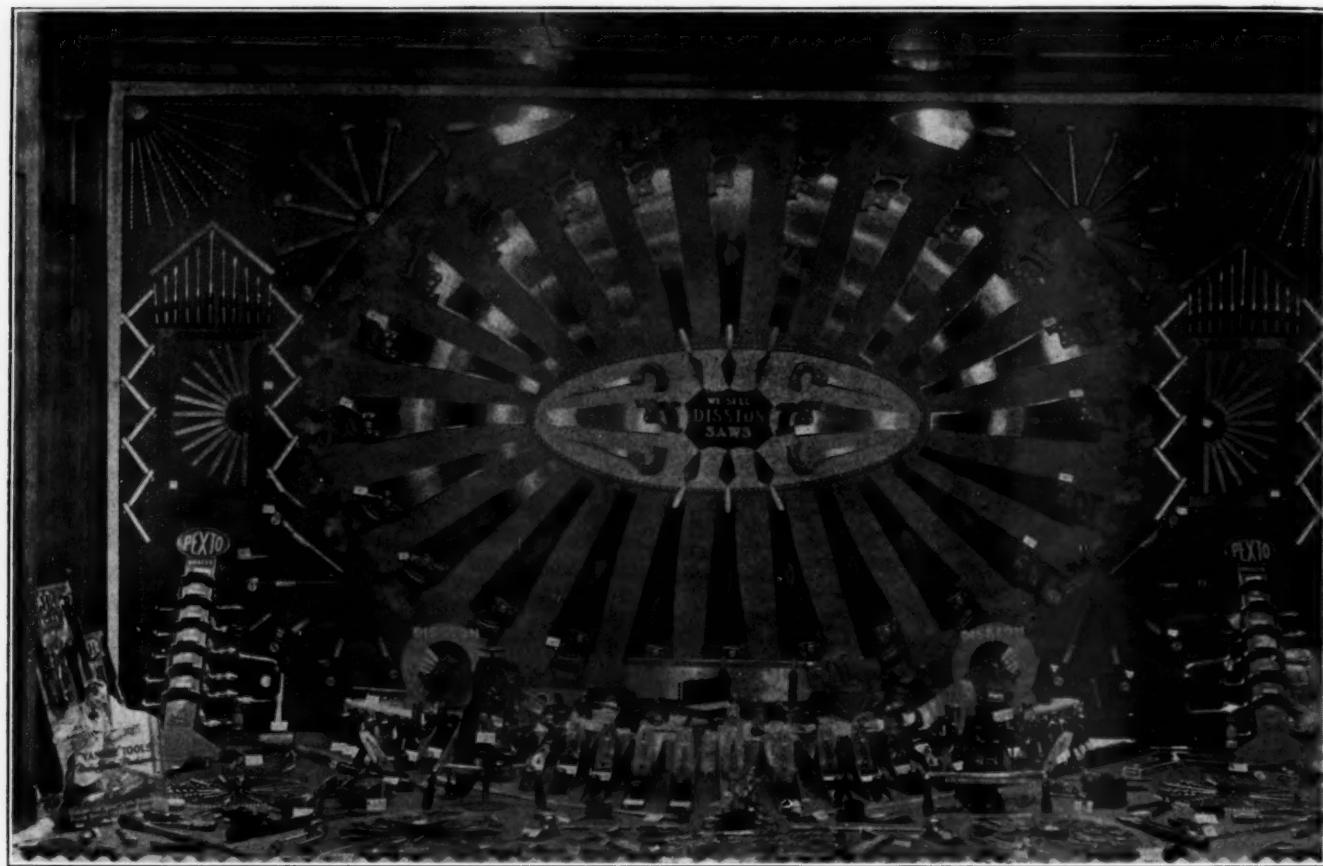
"Cream, tan and brown were the colors used for this display.

"Brown crepe paper covered the

"On an arc-shaped platform covered with cream crepe paper were placed mitre saws, scrapers, vises, etc.

"Resting on edge of platform were different sized planes.

"The floor was covered with tan crepe paper, upon which the differ-



Prize-Winning Window Display Arranged by H. F. Westcott and John Niemi for the L. E. Swift Company, Houghton, Michigan.

Window Display competition.

It was designed and arranged by H. F. Westcott and John Niemi for the L. E. Swift Company, Houghton, Michigan.

This window display proves what a consideration for perfect alignment, symmetry and balance can produce no matter what objects are being displayed. The design as a whole is unique, and the grouping of the tools is particularly well worked out. Although good at any season, it is particularly fitting at

background and upon this was placed a large oval of tan edged with a border of leaves.

A smaller oval of cream edged with brass jack chain formed the centerpiece. On this were arranged pointing trowels and panel and compass saws.

"On the large oval, 24x26 inches, hand saws were neatly arranged. Surrounding this were nail hammers, hatchets, zig-zag rules, trowels, screw drivers, squares, files and car bits, completing the background.

ent tools were very artistically arranged."

Never try to make fun at the expense of your customer. He may seem to like it, but he does not. Usually he does not even seem to like it. Never argue with him. If he makes a proposition you do not like, evade it, and get to something else. If he combats your proposition, get away from that also. Keep on until you find a plane upon which you can agree.

Window Display Competition Judges Find High Average of Merit.

The Winners Are Selected Only After Careful Study of All the Photographs and Descriptions Submitted by Entries.

IT is indeed gratifying to everyone connected with the AMERICAN ARTISAN AND HARDWARE RECORD Window Display competition to note that the quality of the photographs is of such a high order that it is becoming increasingly difficult to select the winners.

It is even more gratifying to note that the tenacity of purpose of AMERICAN ARTISAN AND HARDWARE RECORD in conducting this yearly window display competition proves an incentive to dealers to develop the possibilities of window display work in such a manner as to create new business and thus to enlarge their annual sales.

It feels that the contest which closed April 1 has proved of undeniable worth to dealers who are ever awake and quick to improve their selling and service rendering methods. Under these circumstances AMERICAN ARTISAN AND HARDWARE RECORD considers itself well repaid for its efforts in trying to bring about improvement and interest in this field of the work which it has set itself to do.

The committee chosen to decide upon the merits of each photograph submitted was made up of men prominent in the Chicago hardware field and each man was selected because he possessed qualifications which enabled him to form his decision entirely upon the merits of the display before him.

The Competition Committee consisted of three men all of whom were entirely familiar with all phases of hardware merchandising methods.

F. G. Russell, city sales manager of Hibbard, Spencer & Bartlett Company, State Street Bridge, Chicago, has had long experience in and has practical knowledge of the elements constituting effective window display advertising.

Eugene J. Schuberth, Shuberth &

Company, 5820 Wentworth Avenue, Chicago, is also well versed in the retail hardware sales advertising end of the business and was selected because of his wide knowledge in window display advertising.

Frank Koch, western manager of McKinney Manufacturing Company, 400 North Michigan Avenue, Chicago, is particularly well equipped with practical knowledge in window display advertising to enable him to judge window displays accurately and fairly.

The foregoing judges studied the many photographs entered in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition independently of one another.

Then they exchanged with one another the photographs and descriptions which they considered worthy of further examination.

Thus, by the process of elimination, they arrived at a selection of four entries which they deemed deserving of the cash prizes.

The fact that all three judges agreed upon the same entries in the same order of excellence without controversy or argument is conclusive evidence of the indisputable merits of the winners.

The decision of the judges is herewith submitted:

Decision of Judges.

To AMERICAN ARTISAN AND HARDWARE RECORD:

Being free from the handicap of knowing in advance the actual names and locations of the contestants in your Window Display Competition, we felt ourselves able to estimate the various entries purely upon their merits.

The packages in which the window display photographs and descriptions were contained were handed to us marked with fictitious names.

The sealed envelopes containing

the true names and addresses of the contestants were not opened until after our decisions had been made.

We were agreeably surprised at the uncommon excellence of the photographs and descriptions submitted to us for judging.

We are sincere in taking occasion of this Window Display Competition to express our appreciation of the work being done by AMERICAN ARTISAN AND HARDWARE RECORD to train the retailer in the highly profitable art of window advertising.

In publishing window displays and giving instructions in the principles and practice of window advertising, you are doing a service to the trade which is worthy of the highest commendation.

We are all of one mind in awarding the cash prizes in this Window Display Competition in the following order:

First prize, photograph marked "Tools";

Second prize, photograph marked "Rogers";

Third prize, photograph marked "Spring";

Fourth prize, photograph marked "M. Klitz."

It has been a pleasure for us to have an opportunity of studying so many window displays of unusual merit.

Sincerely yours,
F. G. RUSSELL,
EUGENE J. SCHUBERTH
FRANK KOCH,

Chicago, April 3, 1923.

The sealed envelopes containing the true names and addresses of the contestants were opened after the judges had given their decision. It was then disclosed that the prize winners are as follows:

First prize, \$50.00 in cash, to H. F. Westcott and John Niemi, for L. E. Swift Company, Houghton, Michigan.

Second prize, \$25.00 in cash, to Edgar W. Rohn, of Bond Hardware Company, Guelph, Ont., Can.

Third prize, \$15.00 in cash, Howard C. Crabb, for Belcher & Loomis Hardware Company, 83-91 Weybosset Street, Providence, R. I.

Fourth prize, \$10.00 in cash, to M. E. Klasky, for Kelly-Duluth Company, 118-120 West Superior Street, Duluth, Minn.

Because of many points of excellence, the judges agreed that Honorable Mention should be given to four photographs of displays which were not quite meritorious enough to deserve any of the four prizes in the competition with the actual winners, but which, nevertheless, were superior in design, cleverness, and arrangement to the average window display.

M. G. Cottier, for Murphy-MacLay Hardware Company, Great Falls, Montana.

Howard C. Crabb, two photographs, for Belcher and Loomis Hardware Company.

H. F. Westcott and John Niemi, two photographs, L. E. Swift Company, Houghton, Mich.

The remaining photographs and descriptions of the window displays entered in this competition will be published in future issues of AMERICAN ARTISAN AND HARDWARE RECORD with instructive comments and helpful analysis.

Rogers Sells Business; Mayers and Cornell New Owners.

W. H. G. Rogers, Shreve, Ohio, has sold his business to two enterprising young men. The business will henceforth be operated under the name of Mayers & Cornell. The future plans of Mr. Rogers are as yet unknown. The trade wishes the young men every best wish for success.

Patents and Pertinent Laws Reviewed.

The subject of patents is constantly recurring in connection with the various new developments in industry which spring into existence almost over night.

In order to place reliable information available for the use of those who are desirous of knowing the laws pertaining to this subject, Mr. Richards, now deceased, founder of the firm of Richards & Geier, patent

and trade-mark attorneys, 277 Broadway, New York, published a pamphlet on patents, selecting his material from the most frequently propounded questions and compiling the laws and practices with respect to these questions in a logical, comprehensive manner, keeping in mind the necessity for brevity and conciseness.

This pamphlet has been revised and the second edition is now available gratuitously to all readers interested in the subject. This edition contains a digest of the law and practice pertinent to the subject, but it is not to be taken as embodying all of the information available.

The firm issuing this pamphlet calls special attention to the fact that it is not an advertising pamphlet filled with glittering generalities and intended purely as a means for soliciting business, but rather a means of disseminating accurate and reliable information to those who are prospective applicants for patents who wish to avoid the disagreeable and tedious proceedings of the courts in case of infringements, as well as to learn their rights and privileges under the present laws.

Coming Conventions

National Warm Air Heating and Ventilating Association, Cleveland, Ohio, April 18 and 19, 1923. Allen W. Williams, Secretary, 52 West Gay Street, Columbus, Ohio.

American Hardware Manufacturers' Association, Spring Convention, Windsor Hotel, Jacksonville, Florida, April 24, 25, 26 and 27, 1923. Frederick D. Mitchell, Secretary - Treasurer, 1819 Broadway, New York City.

Southern Hardware Jobbers' Association, Windsor Hotel, Jacksonville, Florida, April 24, 25, 26 and 27, 1923. John Donnan, Secretary-Treasurer, Richmond, Virginia.

Old Guard Southern Hardware Salesmen's Association, Windsor Hotel, Jacksonville, Florida, April 25, 1923. R. P. Boyd, Secretary-Treasurer, R. F. D. 4, Knoxville, Tennessee.

Hardware Association of the Carolinas, Columbia, South Carolina, May 8, 9, 10 and 11, 1923. T. W. Dixon, Secretary-Treasurer, Charlotte, North Carolina.

Arkansas Retail Hardware Association, Marion Hotel, Little Rock, Arkansas, May, 1923. L. P. Biggs, Secretary, 815-816 Southern Trust Building, Little Rock, Arkansas.

Arkansas Retail Hardware Association, Marion Hotel, Little Rock, Arkansas,

sas, May, 1923. L. P. Biggs, Secretary, 815-816 Southern Trust Building, Little Rock, Arkansas.

Panhandle Hardware and Implement Association, Amarillo, Texas, May 14 and 15, 1923. C. L. Thompson, Secretary and Treasurer, Canyon, Texas.

Southeastern Retail Hardware and Implement Association, covering Tennessee, Alabama, Georgia and Florida, Auditorium Armory, Atlanta, Georgia, May 15, 16, 17 and 18, 1923. Walter Harlan, Secretary-Treasurer, 701 Grand Theater Building, Atlanta, Georgia.

National Retail Hardware Association, Richmond, Virginia, June, 1923. Herbert P. Sheets, Secretary-Treasurer, Argos, Indiana.

Missouri Sheet Metal Contractors' Association, Statler Hotel, St. Louis, Missouri, June 25, 1923. Otto E. Scheske, Secretary, 3818 Maffitt Avenue, St. Louis, Missouri.

The National Association of Sheet Metal Contractors, St. Louis, Missouri, June 25 to 29, 1923. E. B. Langenberg, Secretary of St. Louis Convention Committee, 4057 Forest Park Boulevard, St. Louis Missouri; E. L. Seabrook, 608 Chestnut Street, Philadelphia, Secretary.

Sheet Metal Contractors' Association of Pennsylvania, Hotel Allen, Allentown, Pennsylvania, July 26 and 27, 1923. W. F. Angermyer, Secretary, 714 Homewood Avenue, Pittsburgh, Pennsylvania.

Retail Hardware Doings

Arkansas.

The hardware stock of the Mansker Hardware Company at Fort Smith has been sold to Jim Clark. The new name is to be Clark Hardware Company.

Michigan.

Alfred Isaacson has opened a hardware store at Marquette.

Iowa.

A Mr. Baker of Des Moines has purchased the Sterrett Hardware Store at 712 Story Street, Boone.

W. C. Clancy has sold his hardware store at Hubbard to Joseph Nelson of Watertown, South Dakota.

Nels Johnson has sold his interest in the hardware store at Gilbert to B. D. Kent.

The Collins-Hill Lumber and Coal Company of Muscatine has purchased the hardware stock of John J. Beik at Grandview. Elmer L. Young will be in charge of the Grandview branch.

J. D. Fleck has purchased the Van Note hardware stock at Little Rock.

Minnesota.

Fred Koplen has purchased the Kelm hardware store at Alma City.

At Detroit, W. J. Twohy has sold his interest in the Detroit Hardware Company to L. T. Stenseth.

Charles Olson and his son, Adolph, have purchased the hardware business of Bjorn and Lund at Red Wing.

North Dakota.

The hardware store of J. B. Fredricks at Mandan has been destroyed by fire. The loss is estimated at \$18,000.

Wisconsin.

Victor R. Nelson has sold his interest in the East Ellsworth Hardware Company at East Ellsworth, to E. R. Quinn and L. M. Harris.

At Stoughton, Charles M. Weigel has opened a hardware store.

Samuel H. Jacobs, Known to Thousands of Stove and Hardware Men, Passes on to His Final Reward.

A Wonderful Salesman, a Great Friend, a Happy Father and Husband, Is the Tribute of Those Who Knew Him Best.

ON Sunday, April first, there passed on to his reward a man who was respected, admired and loved almost universally by those whose good fortune had permitted them to learn to know him.

Samuel H. Jacobs, Vice-president and General Salesmanager of the Fanner Manufacturing Company, died at the age of nearly 54 years.

"Sam," as Mr. Jacobs was known by stove manufacturers in every section of the United States, was born in the little town of Manlius, near Syracuse, New York, May 25, 1869.

When he was still a youngster in short trousers, his parents died, and the natural thing for Sam was to do his best to help support his younger brothers and sisters, who were cared for in an orphan asylum; and so he did all sorts of odd jobs, sold newspapers, etc., in Syracuse for a time, and although he had attended school only for three weeks, he managed to secure a position as an office boy and later as clerk in the law office of the then well-known jurist, Sherman J. Rose.

In 1889, he came to Chicago and became a solicitor for the tailoring concern of Mossler Brothers, remaining with them for a number of years.

In 1900, Sam made a decided change, as some people would call it, but after all, it was not so much of a change, for he simply switched from selling trimmings for men to selling trimmings for stoves, the concern with which he was connected being that of the Troy Nickel Works, Albany, New York.

For a period of eleven years, Sam traveled all over the country, calling on stove manufacturers, and it is not at all overdrawning the case to say that he knew the name of every stove manufacturer and foundry

superintendent with whom he came in contact during those years, for his memory for faces and names was something remarkable.

In 1911, Sam made another change, but remained in the same line of business, associating himself with the Fanner Manufacturing Company, Cleveland, Ohio, and he did so well with this concern that in 1913 he was appointed General

was prevented from attending and that he was in the hospital fighting the disease which finally conquered him, much regret was voiced and arrangements were made to purchase and deliver to him a beautiful floral greeting with best wishes for his speedy recovery.

He did, by his indomitable will, survive what was then thought to be a fatal attack, but he never fully regained his health, as he was forced to undergo several severe operations, and finally he had to give up. His vitality was exhausted, so on Easter morning he passed away.

We have called him Sam all the way through, for he liked his given name better than his patronymic; he had the habit of referring to his middle initial as standing for "Happy," and that was truly a happy inspiration on his part, for he certainly was the personification of good humor and friendliness.

Besides the thousands of friends and acquaintances, his widow and a daughter, Miss Virginia, a brother and a sister mourn his untimely death. He was a loyal friend, a devoted brother and a happy husband and father in a truly happy household.

The funeral, which took place from his late home, 1888 East 81st Street, Cleveland, Ohio, was attended by many of his former customers in other cities, as well as by a large number of his local business associates and social friends, and it is a noteworthy fact that beautiful and costly floral tributes, telegrams and letters of condolence came from all sections of the country, showing that Sam was considered as a dear personal friend by those who bought from him or associated with him in a business way.



Samuel H. Jacobs.

Salesmanager, and at the annual meeting of the Company in 1917 he was elected Vice-president.

Whenever and wherever stove manufacturers met during the past twenty-odd years, Sam was on the job; always jolly; always ready to relieve tense or dull situations with a clever story; always called upon for information as to the trend of marketing conditions—and always with the sort of information that could be depended upon.

When at the annual meeting of the Southern Stove Manufacturers' Association in 1921, it was announced by the President that Sam

Study and Interpretation of Advertisements.

You Can Make Your Advertisements More Gainful by Avoiding the Faults and Profiting by the Good Qualities of Others.

Hardware men who do business on a cash basis will appreciate the simplicity and directness of the advertisement of J. E. Capling, which is reproduced from his ad taken from the Gladwin, Michigan, *Record*.

Note the explicitness with which the appeal is made. The wording of the ad carries explanatory notes sufficient to enable one familiar with the articles offered to construct in the mind's eye an exact picture of what there is to be had, so that the

Bruske Hardware, Saginaw, Michigan, reprinted from the *Saginaw Courier*. This advertisement is essentially a card. It reveals the spirit and the desire to advertise, but it lacks the appeal necessary to attract customers into the store.

The advertisement would have produced far better results had the advertiser confined himself to one article in an ad of this size. He could have taken the paint ad, for instance, introduced the subject with a short, "catchy" phrase about the advent of spring and the time to

Because We are Selling for Cash

WE WILL SELL YOU A

Buzzsaw Outfit for \$25.00

Either steel or wood frame with 28-inch or 30-inch saw

An 8-inch plate Stover Grain Grinder for..... \$40

Bobsleighs, 2-inch runner, at..... \$22.50

Horse Blankets and Robes from regular price..... 1/4 off

You are invited to call and see our Reduction in Prices under the Cash System

J. E. CAPLING

Light and Heavy Hardware, Implements, Paints, Oils, Etc.

This firm carries a complete line of light and heavy hardware, implements, paints, oils, etc., but the ad is an offer of a few specific articles to a distinct class—the farmers presumably.

"Because we are selling for cash we will"—is a simple statement, and yet it has a strong appeal to the logical-thinking mind.

prospective customer knows what he will find before he sees the article. The price is given in bold-faced type.

The price of the last item is left somewhat indefinite, in as much as the firm is operating on a cash basis.

The invitation to call at the store is well taken.

Bruske Hardware

Yale Locks and Hardware

"Yale Made is Yale Marked."

Jewel Stoves and Ranges

"They Bake Better."

Sherwin-Williams Paints

"Cover the Earth."

When you get a good thing remember where you got it.

"15 Genesec."

begin painting, then connected this up with the fact that he was making a special offer on paint. In order to get the latest available "dope" on advertisements of this kind, he should have written to the Sherwin-Williams Paint Company, asking them to supply him with cuts for the size of ad he wished to run and they would have been glad to do so without cost to him.

The mention of prices must as a rule be made. The saying at the bottom of the ad is good, but it should have been connected up with the name of the firm; then, too, the address of the firm should never be separated as is done here. The advertiser has the proper spirit,

Review of Conditions in the Metal Markets.

General Situation in the Steel Industry. Report of Prices and Tendencies in Sheet Metals, Pig Iron, etc.

Non-Ferrous Market Is Quietest Experienced in Past Six Months.

The copper market is very dull, and this does not apply alone to copper, but to the entire metal trade. Whether by reason of the holiday here and the Easter holidays abroad, it can safely be said that the past week has been the quietest experienced in the metal trade in the past six months.

The firmer London market was offset by the indifference of buyers and some of the smaller producers are shading 17.37½ cents delivered and sales are reported at 17.25 cents delivered. This is the price outside sellers have been asking for some days.

Producers are well sold, consumers well bought and while consumption continues at record, buyers are disposed at present to do nothing until something comes up to excite action on their part. Meanwhile all the metal markets seem to be digesting the heavy business of the recent past, and apparently doing so with comparative comfort.

Exports reported April 4 were 2,793 tons to England.

Producers with output well sold for 60 days, were not disposed to shade 17.37½ cents delivered for electrolytic, either for nearby or future shipment, but toward the close of the week one or two small producers are understood to have accepted 17.25 cents delivered. Casting copper which had receded ½ cent early in the week, recovered this decline at the close of the week.

Production of refined copper has increased, until today it is probably at the rate of at least 200,000,000 pounds a month. Deliveries into domestic consumption, however, are heavy. Some producers report home deliveries in March fifty per cent larger than in February. Others report a decrease from February rate.

The indication is that exports in March were 10,000,000 pounds less than in February. March total deliveries, it is claimed, were fully equal to production by refineries. Any estimates of deliveries in excess of 200,000,000 pounds in March, however, must be taken with reserve.

Chicago warehouse base price. The base price being.

Tin.

The local market during the past two days has been in an exceedingly flat condition and there was a further small recession in prices April 4. Straits tin for all deliveries is offered at 47.75 cents and there have been transactions between dealers at 47.62½ cents. The cost to import tin based on London and Singapore quotations is about 48.25 cents, so the market here is nearly £3 below the foreign parity.

Consumers have shown no interest and the argument that New York is the cheapest market in the world at the present has not induced any buying.

The eagerness of dealers to sell is evidenced by the concessions that they were willing to make.

Lead.

Lead sold down to 8.17½ cents, East St. Louis, the past few days, also at 8.22½ cents, St. Louis. The quotation for eastern delivery has ranged between 8.25 cents and 8.50 cents, depending upon the urgency of delivery. Immediate supplies command a heavy premium, up to 8.87½ cents, New York having been paid for spot carlots.

A prominent producing interest was offering second half April shipment at 8.17½ cents East St. Louis basis April 4 and May shipment at the same figure. Prompt was held at 8.20 cents. Federal, and a fair demand was reported but no great activity.

The buying at present is of a well diversified character, but mostly of carload lots. The larger consumers are not in the market at the moment though their scale of operations is undiminished.

Solder.

Chicago warehouse prices on solder are as follows: Warranted 50-50, \$31.00; Commercial 45-55, \$29.25, and Plumbers', \$27.50.

London was steady and unchanged at £28 5s for both prompt and futures April 4.

Zinc.

The zinc market was void of activity during the last of the week and prices continue nominally unchanged. There are few if any consuming inquiries reported and on the other hand sellers were not attempting to force sales in an unwilling market. The lull is probably temporary, for consumption is in large volume, and a recurring demand for early shipment, such as seen in the past few weeks, is again looked for this month. The good statistical position, and the consequent absence of any pressure from spot stock has served to steady the market during the recent comparatively quiet period. But there was in some directions evident desire on the part of producers for future bookings, though no disposition to cut deeply to get them.

Zinc prices dropped about $\frac{1}{4}$ cent a pound the past week, in the absence of demand. Prime western has been obtainable for prompt and April shipment at 7.70 cents, East St. Louis, with futures quoted lower, down to 7.50 cents to 7.55 cents, East St. Louis.

The zinc ore market at Joplin, Mo., took a tumble at the week end registering a price \$2.50 lower than the previous week. The market range was from \$46.00 for low grades to \$49.00 for sixty per cent ore. At this price the sales for the

week aggregated 12,010 tons, which is approximately the weekly output of the district.

Tin Plate.

The advancing tendency in connection with tin plate prices was being held in check and the general market remains quotable at \$5.25 to \$5.50 per base box, 100 pounds, Pittsburgh. The American Sheet & Tin Plate Company's figure is unchanged at \$4.95 but this is entirely nominal since it cannot accept more business for second quarter delivery and, as yet is not taking third quarter tonnage. In some sections up to \$6 has applied in connection with certain small bookings by independents and one producer in the Youngstown, O., territory claims that one of its customers bid an even higher figure. Generally all prices above \$5.50 are considered premium levels for wanted deliveries; bids by consumers anxious to get tonnage, or else prices named on foreign inquiries, \$6 per base box having been quoted recently on a tonnage for export. New inquiries are developing and producers will be unable to defer for long the naming of figures for the third quarter. Operations of tin mills are on a somewhat lower scale than a week ago, perhaps about 5 per cent, due to the workmen laying off to celebrate church and other holidays. However, the Falcon Tin Plate Co., Canton, O., has started up nine mills and at the Yorkville, O., plant of the Wheeling Steel Corp., six more mills are being placed in operation to make all 24 there active. The general average of tin plate mill operation in the Pennsylvania and Ohio territories is between 80 and 90 per cent.

The minimum price on tin plate for shipment out of stock now appears to be \$5.25 per base box Pittsburgh. Practically all of the mills are refusing to take on additional tonnage for production. In some cases consumers have offered to place large tonnages at \$6 per base box Pittsburgh, but these offers have been declined by the producers due to their overfilled order books.

Sheets.

Producers of steel sheets in the Chicago market have nothing to offer at present, as the leading producer is booked far ahead and can not give deliveries short of several months, while Inland Steel Co. has not yet opened its books for third quarter. The latter company is under considerable pressure from its customers to apportion its third quarter production, but will not do so for several weeks. Consumers who are buying sheets from producers in the valleys and the East find galvanized available at 5.00 cents, black sheets at 4.00 cents and blue annealed sheets at 3.00 cents, Pittsburgh, although as high as 5.25 cents, Pittsburgh, has been asked for galvanized. It is believed this

range of prices is likely to apply to third quarter sheets, when they are made available in the Chicago market. It is not thought wise to let prices go higher than that level for the present.

Old Metals.

Wholesale quotations in the Chicago district, which should be considered as nominal, are as follows: Old steel axles, \$24.75 to \$25.25; old iron axles, \$28.50 to \$29.50; steel springs, \$25.00 to \$26.00; No. 1 wrought iron, \$21.00 to \$21.50; No. 1 cast, \$24.50 to \$25.50, all per net tons. Prices for non-ferrous metals are quoted as follows, per pounds: Light copper, 11½ cents; light brass, 7 cents; lead, 6½ cents; zinc, 4¾ cents; and cast aluminum, 16½ cents. The demand for nearly all lines is heavy.

Pig Iron Market Quiet, Except Chicago, Where \$32.50 Is Asked for Nearby Delivery.

Pittsburgh Reports Fewer Inquiries; New York Market Lacks Momentum of Recent Weeks.

HERE have been few inquiries out for pig iron in the Pittsburgh district and sales particularly in the steelmaking iron are at a standstill.

Interest continues to be expressed by buyers of foundry iron in third quarter requirements. So far sales have been limited for that period, only one being noted this week involving 500 tons on the basis of \$32, valley, for the No. 2 grade and \$1 differential for each 50 points of silicon additional. The \$31, valley, figure, however, continues to apply on the small lots involving up to 200 tons at a time of the No. 2 grade which are being bought from time to time for delivery over the second quarter. Several smaller consumers have not as yet closed on all their second quarter needs. Some slight interest is noted in malleable and a sale of 500 tons of this grade for car wheel purposes is noted at \$31, valley. Gray forge still is quoted at \$30 to \$30.50, valley, and one or two relatively small inquiries are out. On low phosphorus copper-

free iron inquiries which have come up from time to time \$36, valley now is the minimum quoted here.

The northern market at Chicago is now at \$32.50 for nearby delivery and \$32 for third quarter delivery. Prompt carloads command \$33, Chicago, furnace. Third quarter movement is increasing steadily.

The market for southern iron is quiet and deliveries are slow, makers not pressing sales on a basis of \$27, Birmingham. The market for silvery iron is quiet. Inquiry for carloads of Lake Superior charcoal iron is somewhat active. Prices are unchanged. The sale of 250 tons is noted. Some furnaces are banked owing to deep snow stopping fuel supplies. The market for low phosphorus iron is quiet at \$39 Chicago, with an eastern maker quoting \$42, delivered.

The market at Buffalo appears fundamentally firm. A base price of \$29.50 has developed to meet competition. The price of \$30 has been quoted on malleable, although the going figure is said to be \$30.50.